The Role of Socio-Moral Development, Cross-Group Friendship, and Teacher Behavior for Peer Group Inclusivity

Thesis (cumulative thesis)

presented to the Faculty of Arts and Social Sciences

of the University of Zurich

for the degree of Doctor of Philosophy

by Jeanine Grütter

Accepted in the fall semester 2016 on the recommendation of the doctoral committee:

Prof. Dr. Klaus Jonas (main advisor) and Prof. Dr. Bertolt Meyer

Zurich, 2017

Abstract

In recent years, schools have become widely diverse and include children of various academic and ethnic backgrounds. This growing diversity may pose a risk for children from minority groups of being socially excluded. Social exclusion is a complex phenomenon that is influenced by different developmental processes: First, children's development of intergroup knowledge and identification; and second, children's socio-moral development. To account for this complexity, this dissertation combines theories and current findings from social and developmental psychology to investigate how the interplay between these developmental processes leads to children's decisions to exclude their peers. Moreover, from a multi-level perspective, this dissertation investigated social exclusion at three different levels: The individual level (i.e., students' socio-moral development), the dyadic and peer-group level (i.e., student's relationships), and the classroom level (i.e., how teachers' behavior influences children's socio-moral competencies). Based on the findings from six different research papers, this dissertation advances recent theories on the study of children's peer relationships and social exclusion and informs practical applications of how to enhance social inclusion.

Zusammenfassung

Schulen werden immer heterogener und setzen sich aus Kindern mit unterschiedlichster Herkunft und diversen Lernvoraussetzungen zusammen. Kann das schulische Umfeld der zunehmenden Diversität nicht gerecht werden, so haben Kinder aus Minoritätsgruppen ein hohes Risiko, aus den sozialen Aktivitäten der Klasse ausgeschlossen zu werden. Sozialer Ausschluss stellt ein vielschichtiges Phänomen dar, welches von verschiedenen Entwicklungsprozessen abhängig ist. Diese Prozesse sind die Entwicklung des Wissens über soziale Gruppen und soziale Identitäten sowie die Entwicklung sozio-moralischer Kompetenzen. Diese Dissertation integriert Theorien und aktuelle Befunde aus den Bereichen der Sozial- und Entwicklungspsychologie und untersucht mit einem mehrdimensionalen Ansatz, wie das Zusammenspiel verschiedener Entwicklungsprozesse zu sozialem Ausschluss führen kann. Auf individueller Ebene steht dabei die sozio-moralische Entwicklung im Fokus, auf der dyadischen und Gruppen-Ebene werden soziale Beziehungen analysiert, und auf Klassenebene wird untersucht, wie die Lehrperson die Entwicklung sozialer Kompetenzen beeinflussen kann. Basierend auf den Befunden von sechs verschiedenen Forschungsartikeln, bietet diese Dissertation nicht nur neue Erkenntnisse, die der Erweiterung bestehender Theorien dienen, sondern es lassen sich auch weitreichende Empfehlungen für die Praxis ableiten, wie der schulische Prozess der sozialen Inklusion optimiert werden kann.

Acknowledgements

I would like to thank several people who have supported and accompanied me during the three years of my PhD. First of all, I would like to thank my long-term supervisor, Prof. Bertolt Meyer, who supervised my master's thesis and has been my mentor throughout my academic career. Thank you for all your feedback and support during the last years, for believing in my scientific qualities, and for being an inspiring researcher and role model. Furthermore, I would like to express my gratitude to Prof. Klaus Jonas, for supervising this dissertation and providing me with the opportunity to complete my PhD at the University of Zurich.

A special thanks also goes to Prof. Luciano Gasser, who was the project manager of the longitudinal study examining children's socio-moral development in inclusive classrooms, as well as my supervisor at the Teacher University in Lucerne. Thank you for your ongoing constructive feedback and support, and especially for inspiring me about children's socio-moral development research. I would also like to thank, Prof. Alois Buholzer, the head of the Institute for Diversity in Education, for his support during the last three years and for sparking my interest in applied educational research. My gratitude further goes to my colleagues at the Teacher University, whereby, I would like to specifically thank Astrid Portmann, Prof. Evelyne Gutzwiller, Elke Kappus, Loredana Torchetti and Cécile Tschopp for their support, feedback, and encouragement.

I am also very grateful for Prof. Tina Malti's supervision during my research stay at the University of Toronto. To my former colleagues at the University of Toronto, specifically my friends H.B. Antonio Zuffiano, Joanna Peplak, Stefania Sette, and Anouk van Dijk: Thank you for all the enriching conversations on children's social development!

In addition, I would also like to mention four colleagues from the University of Zurich and the University of Groningen, with whom I enjoyed discussing my research on social development, social participation, and statistics and research methods: Martin Götz, Andreas Glenz, Ariana Garrote, and Dorinde Jansma. Moreover, I am grateful for the enriching discussions with Prof. Linda Tropp and Prof. Brigitte Latzko who enhanced the quality of my research.

With regard to the implementation of the study, I am grateful for the work of Christa Rütter, Kirsten Teichmann, Anna Regenass, Nadine Baumann, and Silke Marxer, who conducted a psychological research internship and for the work of the students who have completed their bachelor or master theses within the project. Thank you for your assistance and engagement

in the data collection and data processing. In addition, I would like to thank all the teachers and students who participated in the two studies.

Lastly, my extensive gratitude goes to my family, Monika, Stefan, and Adrian Grütter, and all my close friends who have supported and encouraged me during the last years. I would not know how I would have been able to complete this PhD without you. Of my friends, I want to particularly thank Annkathrin Rohrbach, Bina Knöpfli, Sandra Oeschger, Stefanie Müller, Lea Schnyder, Sarah Meester, Claudia Luginbühl, Martina Schlapbach, Bettina Nägeli, Roberto Viscione, and again Joanna Peplak.

Contents

1 Introduction

Interviewer: “What kind of differences do you perceive in your classroom?”

Student 1: „Not all children are equally good in school. Some children are from other countries. However, someone who is not good in school and not from here has nothing to say and may be treated unfairly.“

Interviewer: “Petra is a child who has problems in school. She needs a lot of time and support to solve tasks in school. Sarah is doing well in school. Who would you choose to work with to solve a difficult math task and why?”

Student 2: „ I would include Petra in my group because she would be happy if someone helps her. It is unfair to exclude Petra because she has difficulties to learn. Just because she is performing poorly, it is still possible to work together with her. Children should look after those who have troubles to learn. If we all work together, we can help Petra to become better in school.”

1.1 Inclusive Education as a Mean to Enhance Social Participation

According to the United Nations’ (UN) convention on the rights of the child, each child should be treated without discrimination of any kind, “irrespective of the child’s or his or her parent’s or legal guardian’s race, colour, sex, language, religion, political or other opinion, national, ethnic or social origin, property, disability[1], birth or other status” (p. 9, 2010). In addition to the UN child rights’ convention, the UN convention on the rights of persons with disabilities specifies that persons with disabilities are not to be excluded from the general education system and have to get access to inclusive, high quality education in order to enable their effective participation in society (United Nations [UN], 2006). By 2016, 21 states have signed, and 166 states have ratified the convention on the rights of persons with disabilities (United Nations Human Rights Office of the High Commissioner [OHCHR], 2016). As claimed by the two conventions, most countries have released policies to create inclusive school environments. In addition to these policies, increasing globalization and several conflicts around the globe have lead to higher levels of international migration. As a

[1] The UN convention on the rights of persons with disabilities defines persons with disabilities as „those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others (UN, 2006, p. 4).

consequence of these developments and policies, schools have become more diversified, including more children with different learning capacities and learning needs, and with different cultural, ethnic, and social backgrounds. This increasing diversity may have several benefits for children and adolescents, as children with different learning needs or with different ethnic backgrounds interact with each other. Research shows that such interactions can – under certain conditions – lead to more inclusive attitudes among children (Grütter & Meyer, 2014; Tropp & Prenovost, 2008), especially when these interactions occur in the context of friendships (Davies, Tropp, Aron, Pettigrew, & Wright, 2011).

However, despite these positive effects of inclusive schooling, increasing diversity may also pose a risk for the experience of social exclusion (i.e., the exclusion from peer activities) or discrimination by peers for children from ethnic minority groups (Vervoort et al., 2010) and for children from minority groups with higher learning needs (Rose et al., 2011). Consequently, inclusive schools do not necessarily lead to positive interactions between students and thereby, do not necessarily enhance the social participation of students from minority groups. Social participation reflects a multi-dimensional construct with different dimensions of peer-relationships that describes how individuals form and organize their social relationships, where high social participation is characterized by higher degrees of peer acceptance, mutual friendships, and peer group membership (for a detailed discussion see section 2.1). In order to enhance social participation, it is important to gain insight into how such diverse school contexts shape children's and adolescents' social experiences. Moreover, since social exclusion is associated with highly negative consequences, such as a higher vulnerability for internalizing disorders, social withdrawal, and school disengagement (Bierman, 2004; Horn, 2003; Rubin, Bukowski, & Parker, 2006), it is important to study how inclusive schooling may trigger social exclusion, and ways to prevent such possible averse effects. One way to prevent or diminish social exclusion is to understand the situational context and the psychological mechanisms that are involved in exclusionary behavior. In other words, it is essential to gain insight into how children and adolescents develop their understanding of social situations, in which children are excluded.

The two statements at the beginning of the introduction illustrate how children from inclusive school environments think about differences in their classroom and how they reason about social exclusion. Both statements show that children of inclusive schools may become aware of the unfair treatment of certain students due to their learning abilities and their ethnic background. The first statement shows that, in some school classes, these students may not be participating and may be at risk for exclusion. In contrast, the second statement demonstrates

that children may become more tolerant of children with higher learning needs, increasing their inclusive intentions, and strengthening their solidarity with children with higher learning needs. In short, the two statements highlight the double-sidedness of inclusive education; thus the question is: How do inclusive school environments need to be designed in order to ensure social participation of all students and decrease social exclusion or isolation?

1.2 Research Objectives

In order to understand how inclusive school environments would ideally need to be designed to enhance social participation of all students, it is important to comprehend the developmental processes that provide the basis for children's and adolescents' exclusionary behavior. A developmental focus when studying social exclusion is important, as exclusion is a complex phenomenon that depends on the dynamic interplay of different developmental processes (outlined below). Research on social exclusion has focused on the origins, sources, and developmental trajectories that may lead to its occurrence. A child may be excluded due to individual or interpersonal reasons (i.e., dyadic exclusion due to conflictuous social relationships), or due to reasons based on stereotypical expectations (Killen, Mulvey, & Hitti, 2013; Killen & Rutland, 2011). Much of the literature has focused on examining exclusion based on individual and interpersonal reasons (e.g., aggression; see Rubin et al., 2006); however, children may also be rejected for reasons that have little to do with their individual traits, such as their social group membership (e.g., ethnicity). Thereby, although often overlooked, stereotypes about social groups, intergroup attitudes, and group norms largely shape children's and adolescents' social experiences and can contribute to social exclusion (Killen, Elenbaas, & Rutland, 2016).

Recently, social exclusion has been investigated from an intergroup perspective (Killen & Rutland, 2011) and examined how intergroup relations influence children' exclusion decisions. Traditionally, social and developmental scientists have studied peer group inclusivity in relation to children's development of intergroup relations and intergroup attitudes. Both lines of work, however, proved to have several limitations. On the one hand, social psychologists mainly focused on the social context and studied how personal identification with various social groups relates to intergroup attitudes. Most of this research has either been conducted with adults or has used age as a control variable; thus, these concepts cannot be transferred to childhood and adolescence without developmental considerations, such as how children and adolescents understand social categories, social groups, and group norms (Killen & Rutland, 2011). On the other hand, developmental

psychologists have focused on the development of children's socio-moral competencies as a precondition for the formation of intergroup attitudes, without regarding the impact of children's identification with different social groups and the influence of group norms on this process. Social and developmental research traditions have only recently been integrated. One theory that elicits this integration is the social reasoning development theory (Rutland, Killen, & Abrams, 2010). A central assumption of this theory is that children's and adolescents' decisions of who to include or exclude in peer activities depend on two different developmental trajectories: First, their development of intergroup attitudes and understanding of group norms; and second, their development of socio-moral competencies (Killen et al., 2016).

Considering social and developmental frameworks, this dissertation follows ***three main objectives***. The ***first main objective*** is to gain insight into how inclusive school environments shape children's social relationships, whereby I develop a multi-dimensional framework of social participation to address open questions in current research on social inclusion. Investigating how these social relationships relate to the development of inclusive intergroup attitudes among children and adolescents is the ***second main objective*** of this dissertation. Here, I specifically focus on the role of cross-group friendships (i.e., friendships between children from different social groups), as such friendships have the strongest effects on children's and adolescents' positive intergroup attitudes (Tropp & Prenovost, 2008). I review findings from literature on children's peer relations to provide a conceptual background of the meaning and development of friendships during different developmental periods, and combine this knowledge with both the literature on the formation of intergroup attitudes, and the literature on children's and adolescents' socio-moral development. In other words, I integrate different theories from social and developmental psychology to provide a comprehensive understanding of the role of cross-group friendships and children's socio-moral development for peer inclusivity in inclusive school settings. The ***third main objective*** of this dissertation is to provide insights into how teacher behavior in inclusive school environments influences children's and adolescents' socio-moral competencies, their exclusionary behavior, and their socio-emotional adjustment. Taken together, this knowledge will provide important insights into how inclusive school environments can be designed to foster students' healthy social development in the area of peer group inclusivity.

In short, the main objectives of this dissertation focus on different aspects that represent three different levels of inclusive education (see Figure 1): At the dyadic and peer group level, the dissertation focuses on the development of children's peer relations (i.e., social

participation in inclusive schools and children's and adolescents' intergroup friendships). At the individual level, the dissertation aims to better understand the developmental processes that guide children's and adolescents' exclusionary behavior. Lastly, at the classroom level, the dissertation investigates the role of the teacher in children's and adolescents' development of socio-moral competencies and in their socio-emotional adjustment.

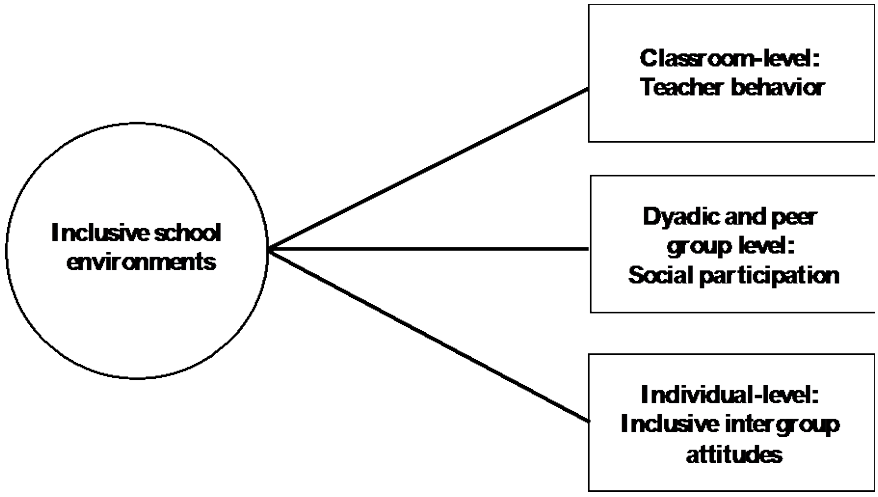


Figure 1. Multi-level framework to investigate social exclusion in inclusive school environments

1.3 Dissertation Structure

This dissertation includes six empirical articles (referred to as chapters in this dissertation) that were derived from two larger studies. In order to illustrate how these chapters relate to the main objectives of this dissertation, I start with a general introduction of the theoretical background according to the three different levels of inclusive education. First, I focus on the dyadic and peer group level and discuss children's social relationships in inclusive schools; second, I outline how social relationships relate to the development of inclusive intergroup attitudes; and third, I discuss the role of the social context in peer group inclusivity. For each part, I first illustrate the *status quo* of, and open research questions in, the current literature, and then derive specific research questions and a conceptual framework to address these research gaps. For each research question, I refer to the chapters that specifically address these topics. In the last part of the introduction, I shortly illustrate the methodological design of the two larger studies that provided the basis for the six chapters. In sections 6-11, I include the six chapters and subsequently, integrate the findings in the general discussion of the dissertation (see section 12), which will include a discussion on how the chapters relate and extend current literature, and the practical implications of the findings.

2 Social Participation in Inclusive Schools

2.1 Theoretical Background and the "Status Quo" of Research in the Field

Inclusive school environments are composed of children with different learning capacities and learning needs, and with different cultural, ethnic, and social backgrounds; thus inclusive education refers to a process in schools with the goal of creating an environment that meets the needs of a wide diversity of students (Ainscow, 2009). The core idea of inclusive schools is to enhance the social participation of students with different social and ethnic backgrounds and, specifically, students with special educational needs (SEN; Lindsay, 2007). Students with SEN refer to students with higher learning needs who need additional assistance in order to effectively participate in the classroom activities of the regular school curriculum. International comparisons show that the term SEN captures a broad variety of different requirements: Physical disabilities, intellectual disparities, and delayed social-emotional development. The SEN terminology reflects how differences in academic functioning are judged by institutions; thus, school policies define which differences deserve additional support (Powell, 2006). In the Swiss education system, where the two studies of this dissertation were conducted, the term SEN is reserved for students who receive additional assistance from a teacher with particular skills in dealing with SEN. This additional support is based on comprehensive interdisciplinary assessments of students' capacities relative to their age group. According to this practice, 3.4% of all the students in Swiss primary and secondary schools have SEN. In addition to students with SEN, Swiss classrooms have a high ethnic diversity, where approximately 25.6% of the students are not of Swiss nationality. Thereby, 44.9% of these students with non-Swiss nationality receive special educational assistance (Bundesamt für Statistik [BFS], 2015).

In the last ten years, most of the Swiss cantons have released policies regarding inclusive education and have started to place students with SEN in regular classrooms (Oelkers, 2012). Traditionally, these students attended small separate classes within regular schools or visited schools designed for special needs education; in short, students with SEN were excluded from the regular school system. In order to support regular classroom teachers in inclusive classrooms, these teachers receive additional support (the amount of additional support depends on the needs of the students in their class) from a special needs teacher (Haeberlin, Bless, Moser, & Klaghofer, 2003). This additional support should guarantee that students are participating in classroom activities; however, despite strong evidence that

including these students into the regular classroom can be beneficial for their academic achievement and social skills (Lindsay, 2007), recent studies have also shown that social participation of students with SEN may be limited.

An extensive review of the current literature shows that social participation and social inclusion are used interchangeably (Koster, Nakken, Pijl, & van Houten, 2009). Social inclusion is defined as "taking full and active part in school-life, be a valued member of the school community and be seen as an integral member." (Farrell, 2000, p. 154) In order to investigate social inclusion or social participation, prior research has studied peer acceptance, friendships, and other peer interactions in the classroom (Koster et al., 2009). The results of these studies suggests that these students are less popular and have lower numbers of friendships than their peers without SEN (Bless, 2007; Ellinger & Stein, 2012; Haeberlin et al., 2003). However, the current state of research on social participation in inclusive classrooms is not consistent, as some studies revealed no differences between students with and without SEN in their number of friends (e.g., Avramidis, 2010; Nakken & Pijl, 2002). Most of this research was based on sociometric data (i.e., peer nominations) and scholars have used a variety of different operationalizations and measures to assess social participation, without distinguishing between different aspects of social relationships and its meanings for inclusive classrooms. As a consequence, social participation and social inclusion have been interpreted in numerous ways, whereby the source of this problem may lay in the lack of an explicit and clear definition of social inclusion and social participation (Koster et al., 2009). Koster et al. (2009) proposed to focus on social participation as the most suitable concept to study the social dimension of inclusion, as inclusion is defined as a larger process of schools to adapt to the diverse needs of students (Ainscow, 2009).

In contrast to the study of peer relationships from the perspective of social inclusion, research on the formation of children's and adolescents peer relationships differentiates between aspects of popularity, friendship, and peer groups (e.g., Rubin et al., 2006). Thereby, these different aspects of social relationships uniquely predict multiple aspects of adjustment and do not necessarily relate to one another (Gifford-Smith & Brownell, 2003). For example, an unpopular child can still have reciprocal friendships, whereas a child can be very popular, but not have any friends (Ladd, Kochenderfer, & Coleman, 1997; Parker & Asher, 1993). While popularity reflects a child's acceptance by the larger peer-group, friendships represent reciprocal relations between two children (Gifford-Smith & Brownell, 2003). Thus, although low sociometric status (i.e., low popularity) poses a risk for school difficulties and school drop-out (e.g., Ollendick, Weist, Borden, & Greene, 1992), friendships have a protective role

in children's academic achievement, and their social-emotional adjustment (Hodges, Boivin, Vitaro, & Bukowski, 1999; Ladd et al., 1997). Therefore, friendships predict social competence, even after popularity and peer group membership is taken into account (Gest, Graham-Bermann, & Hartup, 2001). Children's participation in peer groups reflects a third dimension of social relationships; however, little is known about how peer group membership relates to the other two dimensions of peer relationships (Gifford-Smith & Brownell, 2003), except that less popular children seem to hold more peripheral positions in peer groups. Friendships and peer groups seem to demand different skills, as peer groups include relationships with more members and require an understanding of group dynamics (Gest et al., 2001).

Taken together, as various aspects of social relationships uniquely predict adjustment, a more differentiated focus on social relationships is warranted. However, only few studies have investigated all three aspects (i.e., popularity, friendship, and peer group inclusion) of social relationships simultaneously (Gifford-Smith & Brownell, 2003). With regard to inclusive classrooms, this multi-dimensional conception of social participation would provide a more holistic picture of social inclusion.

Furthermore, how social relationships form between students in inclusive school environments also depends on the composition of the classroom (Moody, 2001). Findings pertaining to the link between diversity in schools and children's social participation are equivocal (Thijs & Verkuyten, 2014): While some studies found positive effects on children's social participation (Quillian & Campbell, 2003), other studies found more discrimination against minority group students (Vermeij, van Duijn, & Baerveldt, 2009). Most of these studies have focused on the composition of the school class in terms of cultural diversity and, from an intergroup perspective, examined how the composition of minority and majority group students affects social participation. In addition to this intergroup perspective, research on children's peer relationships has focused on how the classroom context influences the social acceptance of children with certain individual traits, such as children who are socially withdrawn, show aggressive behaviors, or show high levels of pro-social behavior. Consistent with the central assumption of the social misfit model (Wright, Giammarino, & Parad, 1986), the results of these studies suggest that the composition of the classroom provides a descriptive norm on which behaviors are acceptable. If children deviate from the descriptive norm, they are less accepted by peers, as their behavior does not fit with the average behavior of the peers in the classroom (Chang, 2004; Stormshak, Bierman, Bruschi, Dodge, & Coie, 1999). For example, children who are aggressive are at a higher risk of rejection in

classrooms with a low number of students with aggressive behavior as compared to classrooms with a high number of classmates who show aggressive behaviors (Chang, 2004). Therefore, with regards to the social participation of students with SEN, social relationships within the classroom might depend on the composition of students with and without SEN. For example, if a classroom includes a higher number of students with SEN, these children may be more accepted, because SEN is more likely to be seen as a normative behavior. The question of how the classroom composition in terms of the number of students with SEN or with low academic achievement influences children's social participation tends to be understudied (Dijkstra & Gest, 2015; Huber, 2009). In other words, it still has to be determined how classroom diversity with regard to students with SEN relates to social inclusion.

2.2 Research Questions and Theoretical Framework at the Dyadic and Peer Group Level: Assessing Social Participation in Inclusive Schools (Chapter 1)

The previous section illustrates that a variety of different operationalizations and measures have been used to investigate social participation, without distinguishing between different aspects of peer relationships and their meaning for social participation (Koster et al., 2009). In contrast, research on the development of children's peer relationships has proposed a framework including the three aspects of popularity, friendships, and peer groups, as these components differentially predict children's socio-emotional and academic adjustment (Gest et al., 2001; Gifford-Smith & Brownell, 2003; Rubin et al., 2006). The first chapter of this dissertation integrates this research on the development of children's peer relationships with research on social inclusion within inclusive education. In particular, I use the definition of social relationships as multi-dimensional construct (see above) to investigate social relationships in inclusive school environments (see Figure 2). With this multi-dimensional perspective on students' social relationships, the first chapter of this dissertation provides new insights regarding the question of whether students with SEN participate in social activities of inclusive classrooms. Moreover, the first chapter of the dissertation focuses on the effects of classroom composition (i.e., proportion of students with and without SEN) on students' participation, as previous research on this topic is scarce (Chang, 2004; Huber, 2009). In particular, the first chapter provides answers to the following two questions:

1. Do children with special educational needs socially participate in inclusive school classes?

2. How does the composition of the classroom shape children's social relationships?

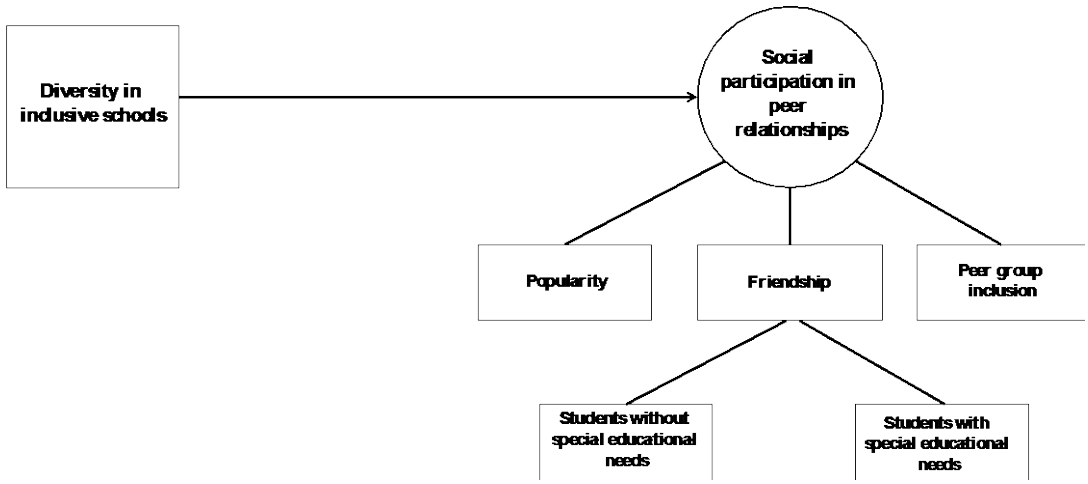


Figure 2. Theoretical framework used to examine social participation in inclusive schools

To address the first research question of whether children with SEN socially participate in inclusive classrooms, I review different methods of social network analysis and propose several methodological approaches that represent the three aspects of social relationships (see Figure 2). In order to investigate this question using a multi-dimensional approach, these measures that represent different aspects of social relationships are compared between students with and without SEN. In addition, I investigate how classroom diversity based on the number of students with SEN influences social participation. Based on the social misfit model (Wright, Giammarino, & Parad, 1986), I assume that higher diversity in terms of the number of students with SEN positively predicts social participation.

As friendships are not only highly predictive of children's and adolescents' school adjustment and social development (Hodges et al., 1999; Ladd et al., 1997), but also an important mean to promote positive intergroup attitudes, friendships are the focus of this dissertation. Furthermore, as enhancing social participation requires a change in the attitudes of the majority group of students without SEN (Bates, McCafferty, Quayle, & McKenzie, 2015), the second main objective of this research focuses on the questions ***when*** and ***why*** cross-group friendships predict inclusive intergroup attitudes.

3 Reducing Social Exclusion Through the Development of Inclusive Intergroup Attitudes in Childhood and Adolescence

As suggested in the previous section, placing children with SEN into regular classrooms does not guarantee their social participation; thus, instead of fitting a child into a pre-existing school system, the school environment should be designed to suit the needs of every child (Eberwein & Mand, 2008). Therefore, school environments need to build on classroom diversity in order to create inclusive societies (Ainscow, 2009). Changing the school environment means also changing the attitudes of majority-group children (e.g., children without SEN, children with Swiss nationality) and creating a climate that values and embraces diversity. How children and adolescents perceive and value differences between students and how this process is related to their exclusion behavior is outlined in the next sections.

3.1 Theoretical Background and the "Status Quo" of Research in the Field

In order to provide the theoretical background for understanding how children and adolescents perceive and value differences between students, I first outline theories on the development of children's social identification with groups and illustrate, how the perception of differences may result in social exclusion. Since social exclusion does not solely depend on children's and adolescents' understanding of group identity and group dynamics, the second paragraph summarizes current theories on socio-moral development with regard to the emergence of intergroup attitudes. Furthermore, the emergence of positive intergroup attitudes also depends on children's peer relationships, and particularly their cross-group friendships (e.g., Tropp & Prenovost, 2008). Thus, the third paragraph of this section reviews current literature on the meaning and development of friendships and the formation of positive intergroup attitudes. Lastly, the fourth paragraph focuses on the processes that may explain why friendships between children who are different from each other may result in inclusive intergroup attitudes.

3.1.1 Social Identity and Social Categorization Theory and Social Exclusion

The greater diversity of inclusive classrooms may be associated with a higher risk for exclusion of children from minority groups (i.e., children with SEN and immigrant children), if students negatively perceive differences in the classroom. Several theories have made specific assumptions on the processes of how perceived differences affect children's social experiences. First, it has been argued that individuals choose to affiliate with others who are

similar to themselves because similar values, attitudes, and behaviors create attraction and affirm one's self-concept (Byrne, 1971). However, under certain conditions, individuals may also affiliate with individuals who are dissimilar, depending on how they perceive the social situation. This process is explained through the Social Identity Theory (SIT) and the Self-Categorization Theory (SCT). According to these two theories, the social context shapes children's social experiences as they identify with various social groups. Social groups are defined as "two or more individuals who share a common social identification of themselves or, …, perceive themselves as members of the same social category." (Turner, 1982, pp. 15).

SIT differentiates between personal identity (i.e., the individual with his or her unique attributes) and social identity (i.e., an individuals' belonging to certain social groups), and assumes that depending on how individuals perceive the social situation they may think, feel, and act based upon personal or social identity (Tajfel & Turner, 1979). Thus, extending the similarity-attraction paradigm (Byrne, 1971), individuals do not only interact at an interpersonal level and perceive similarity based on individual characteristics, but their interactions may also be determined by their social group membership (Turner, 1982). SIT further posits that individuals define themselves in terms of their membership in different social groups and internalize these social groups into their self-concept. Thus, individuals are strongly influenced by their social group memberships. As individuals are motivated to achieve and maintain a positive self-concept, they compare and positively distinguish their own group from other groups (Tajfel & Turner, 1979).

The SCT furthermore describes the psychological process that drives an individual to behave as a group member, namely depersonalization (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). SCT assumes that individuals categorize themselves into different social groups and place themselves into a group that best reflects characteristics of their own self-concept. Certain characteristics (e.g., ethnicity) are used to classify individuals into different social groups, whereby this process depends on which characteristics of groups are salient to an individual in a given situation; thus, this social categorization process can occur along any type of criteria, distinguishing an in-group from an out-group (Turner et al., 1987). As the perception of an individual as a member of certain social groups depends on the social characteristics that are salient to the individual, some contexts can be more influential for the perception of an individual as a member of social groups (motivating intergroup behavior), while in other situations, individuals may be more likely to perceive themselves in terms of their personal identity (i.e., as an individual and not as a member of social groups), motivating interpersonal behavior (Turner, 1982; Turner et al., 1987). The salience of a characteristic in a

given situation depends on its cognitive accessibility (i.e., how easily a certain characteristic is cognitively activated), comparative fit (i.e., if individuals within groups are more similar in terms of a certain characteristics than between groups), and normative fit (i.e., how meaningful a certain characteristic is in a specific social situation) (Turner et al., 1987).

Taken together, social categories provide the basis for individuals to define themselves as members of social groups, including them within some social categories and excluding them from others (Turner, 1982). As a consequence of these processes, individuals perceive positive similarities between members of the in-group. This process in turn may lead to in-group bias; thus, if children have to choose between including a member of their in-group versus a member of the out-group, they prefer the in-group member (Abrams, Rutland, & Cameron, 2003). In addition to in-group bias, the social categorization of an individual as a member of the out-group can result in stereotypes and prejudice, as the out-group may be perceived as homogenous (Turner et al., 1987). Stereotypes are defined as traits that are viewed as characteristic of a particular social group and are attributed to groups without recognizing intragroup variation (e.g., all immigrant children are bad at school). Prejudice is defined as negative affective expressions towards a group or towards group members (Dovidio, Hewstone, Glick, & Esses, 2010). Stereotypes and prejudices can lead to social discrimination and may promote discriminatory acts such as exclusion. Thus, children's social identification with certain groups may accentuate differences between students and result in intergroup biases, which may then lead to social exclusion (Abrams, Hogg, & Marques, 2005).

Research on the development of children's and adolescents' social identity specifies two factors that influence which social group memberships are salient to children. First, the social context that shapes which categories are meaningful to children (Phinney, 2008); and second, children's developmental period. Social categories that are perceptually salient (e.g., gender and race) become meaningful to children at early stages in development. Less physically obvious and more complex social categories develop later (e.g., nationality, disability) (Killen & Rutland, 2011). In addition to the ability to categorize individuals into social groups, which develops early in life, children acquire knowledge about stereotypes associated with these social categories (Spears Brown & Bigler, 2005). Once aware of stereotypes, they shape children's and adolescents' social experiences, as individuals may rely on them when deciding who to include in peer activities (Mulvey, Hitti, & Killen, 2010). Social identities become increasingly important during adolescence (Bennett & Sani, 2004) when individuals are looking for a source of positive and shared identity (Teichman, Bar-Tal, & Abdolrazeq,

2007). Consequently, social exclusion can serve as a means to enhance adolescents' sense of identity (Abrams & Rutland, 2008; Nesdale, 2008), by including peers who best fit and support their identity.

In conclusion, in order to better understand children's and adolescents' exclusion behavior, research needs to take into account children's and adolescents' identity development and their motivation to maintain positive social identities.

3.1.2 Socio-Moral Development and Social Exclusion

Exclusion behavior in children and adolescents does not only depend on social identification with groups, stereotypes, and intergroup attitudes, but also on social and moral development. Moral norms are the opposite of prejudice norms, as expressing prejudice violates moral norms of fairness and equality (Killen & Rutland, 2011). How children and adolescents understand and apply norms of fairness and equality is best captured by the social domain theory (Smetana, 2006; Turiel, 1983). According to this theory, children organize their knowledge about the social world in different social domains: The moral domain that relates to welfare, justice and rights of others; the social-conventional domain that reflects understanding of conventional norms, rules, and traditions shaped by authorities and societies; and the personal domain that reflects individual preferences and need for personal autonomy. These three domains of knowledge are reflected in children's reasoning about social interactions (Smetana, 2006; Turiel, 1983). That is, in situations where, for example, children have to decide whether to include one peer over another, they must balance and integrate their social knowledge about these different domains. Prior research on children's reasoning about social exclusion shows that children perceive the straightforward exclusion of a minority group member solely based on stereotypes as wrong and unfair, independent of age (Killen & Stangor, 2001; Malti, Killen, & Gasser, 2012). However, most contexts in which children and adolescents decide who to include in peer activities are more complex and depend on group membership, stereotypes and prejudice, and social group knowledge; thus, intergroup exclusion is seen as a multi-faceted interaction (Killen et al., 2016). Therefore, in order to investigate social exclusion from an integrative perspective, social domain theory and social identity theory have been integrated in the social reasoning development model (SRD) (Rutland et al., 2010).

A central premise of the SRD model is that, when children are faced with decisions of including a member of the minority group, moral reasoning often conflicts with social conventional reasoning, such as group biases. For example, boys may exclude a girl from a baseball game because they may think that her participation could be disruptive for the team,

because the girl would not fit into an all-boys team, or because of stereotypes that imply that girls are bad at baseball (Killen & Stangor, 2001). Thus, depending on the social context, children's decisions are a result of how they coordinate their preference for their in-group with the application of moral principles (Killen et al., 2016). Influencing factors of children's and adolescents' decisions are, on the one hand, their own social identities, their understanding of social categories, and the norms associated with these categories; and on the other hand, their socio-moral development (Rutland et al., 2010). According to the SRD model, these two developmental processes are interlinked and happen simultaneously (Killen et al., 2016). For example, as children's social interactions increasingly take place in the context of their peer groups, children increasingly attend to group norms (Abrams, Rutland, & Cameron, 2003; Killen, Rutland, Abrams, Mulvey, & Hitti, 2013). Group norms can be defined as the group members' shared expectations about attitudes, beliefs, and behaviors that group members should display (Nipedal, Nesdale, & Killen, 2010). As a consequence of the increasing influence of group norms, group identity and group dynamics become more influential when children evaluate the legitimacy of excluding individuals of minority groups (Abrams & Rutland, 2008; Killen & Rutland, 2011). Thereby, older children and adolescents more often justify the exclusion of a minority group member with concerns of group functioning compared to younger children (Killen & Stangor, 2001). In short, if children do not fit stereotypic expectations related to group norms or in-group identity, they are easy targets for social exclusion during late childhood and early adolescence.

Most of the research on social exclusion has focused on social categories, such as ethnicity or gender. Little is known about children's reasoning regarding social exclusion in inclusive classrooms. Some recent studies show that the majority of the children perceive the exclusion of a child with disabilities as wrong (Gasser, Chilver-Stainer, Buholzer, & Perrig-Chiello, 2012; Gasser, Malti, & Buholzer, 2014, 2013). However, children's decisions to include or exclude peers with disabilities depend on the type of disability and the social context: Children are more likely to exclude hypothetical classmates with mental impairments in academic contexts (e.g., solving a difficult math task) as compared to social contexts. Similarly, students are more likely to exclude hypothetical classmates with physical disabilities in athletic contexts as compared to social contexts. Therefore, older children become more likely to integrate knowledge about social contexts and stereotypes regarding children with disabilities. Moreover, when reasoning about social exclusion, older children and early adolescents mostly judge the exclusion of children with disabilities as acceptable based on group functioning (Gasser et al., 2012, 2014). For example, in the second study of

this dissertation, in the context of including a child with low academic achievement into a math task, an adolescent stated: "It is easier to work with Sarah [child without SEN]: Our group is much faster and we can achieve better results together. I am getting nervous if I work with people like Petra [child with SEN] because they are slow and doing poorly."

In addition to children's and adolescents' reasoning about social exclusion, children's emotions may provide further insight into their understanding of the social situation, as these emotions reflect children's motivation to act in line with moral principles (Killen & Malti, 2015; Nunner-Winkler, 2007). If children attribute negative emotions (e.g., sadness or guilt) to a person who excludes a minority group member, this reflects that they accept the validity of moral norms (Killen & Malti, 2015; Malti et al., 2012). Furthermore, negative (i.e., moral) emotions indicate that children understand the negative affective consequences of exclusion on the excluded target and the excluder (Nguyen & Malti, 2014). For example, a child may perceive the exclusion of a student with SEN as unfair, because the excluded person would feel sad. If the child is motivated to avoid harming the student with SEN, the child expects that excluding this student would be associated with negative emotions.

With regard to children's and adolescents' development of moral emotions, prior findings indicate that, by the age of six, children's emotions about moral transgressions closely relate to their judgments of the wrongfulness of these transgressions (Malti, Gasser, & Gutzwiller-Helfenfinger, 2010). In addition, moral emotions become more complex with age (Malti, Gasser, & Buchmann, 2009) and as children age, they anticipate more negative feelings after moral transgressions (Malti et al., 2010). In line with this reasoning, a recent study shows that, with age, children become more likely to report feelings of guilt and empathy when a child with SEN is excluded from peer activities. However, as older children are also more likely to judge social exclusion as appropriate because of group functioning reasoning, they report less moral emotions if the inclusion of the child conflicts with group functioning norms (Gasser et al., 2014). Moreover, early adolescents are more likely than younger children to expect an excluder to feel positively about excluding a minority group member based on nationality as they expect that the excluder wants to maintain group identity (e.g., Swiss children would feel proud about excluding a Serbian child, because they want the football team to remain all Swiss) (Malti et al., 2012).

In summary, prior research shows that emotions in contexts of social exclusion complement children's reasoning and judgments about social exclusion, as these emotions reflect an evaluative appraisal of their judgments. In this way, emotion attributions provide information about an individual's sensitivity to moral conflicts (Turiel & Killen, 2010), such

as situations in which children and adolescents decide who to include in peer activities. Thus, in order to understand children's and adolescents' exclusion behavior, it is essential to examine the development of their socio-moral competencies, reflected in their reasoning and emotions in contexts of social exclusion. As proposed by the SRD model, this knowledge should be combined with information about the development of social identities and intergroup attitudes. In addition to the integration of theories on these developmental processes, the SRD specifies three factors that can influence children's reasoning about social exclusion: Inclusive group norms, the perception of the out-group as threatening, and intergroup contact. How contacts between children from different social groups relate to inclusive intergroup attitudes is outlined in the next section. Thereby, the focus lies explicitly on friendships, as these close relationships are not only predictive for children's and adolescents' adjustment (e.g., Hodges et al., 1999), but also have the highest potential to reduce negative intergroup attitudes (e.g., Davies et al., 2011).

3.1.3 Cross-Group Friendships and Inclusive Intergroup Attitudes: A Developmental Perspective

A promising source of promoting respect for diversity and reducing social exclusion is intergroup contact (Aboud & Spears Brown, 2013; Killen & Rutland, 2011; Tropp & Prenovost, 2008). Intergroup contact theory predicts that contact between members of different social groups can result in more favorable attitudes towards the out-group (Allport, 1954). With regard to children, intergroup contact is seen as way to combat prejudice at an early stage in life, before negative intergroup attitudes become deeply entrenched in adulthood (Rutland & Killen, 2015). There is strong evidence that contact between children from different social groups can reduce prejudice (for meta-analyses see Raabe & Beelmann, 2011; Tropp & Prenovost, 2008), particularly if contact occurs in the form of friendship (Aboud, Mendelson, & Purdy, 2003). Strengthening this line of argumentation, some initial longitudinal studies show that cross-group friendships can foster positive attitudes towards students from ethnic minority groups (Feddes, Noack, & Rutland, 2009; Munniksma, Stark, Verkuyten, Flache, & Veenstra, 2013; Vezzali, Giovannini, & Capozza, 2012). In addition to children's and adolescents' intergroup attitudes, cross-group friendships may also change their reasoning about social situations. Studies that have tested this assumption demonstrated that children and adolescents with a cross-group friend rated social exclusion based on group membership as more wrong than children without a cross-group friend (Brenick & Killen, 2014; Crystal, Killen, & Ruck, 2008; Killen, 2007; Ruck, Park, Crystal, & Killen, 2015; Ruck, Park, Killen, & Crystal, 2011) Furthermore, children and adolescents with cross-group

friends used fewer stereotypical reasons to explain why they or other people may feel uncomfortable about interracial interactions (Killen, 2007; Ruck et al., 2011). These children also showed a greater use of moral reasoning when a child was excluded based on race (e.g., "It is unfair to exclude a child because he is African American") (Ruck et al., 2015). In short, cross-group friendships in children and adolescents may change children's reasoning about social situations by decreasing stereotypical expectations. As a result, cross-group friendships may not only promote positive intergroup attitudes, but also reduce exclusion based on social group membership.

However, with regards to inclusive schools, research scholars have paid little attention to potential positive consequences of such friendships. Some of the first studies conducted on this topic show that cross-group friendships among students with and without SEN can reduce negative attitudes towards students with SEN (Grütter & Meyer, 2014; Laws & Kelly, 2005). In order to determine *if*, *when,* and *how* inclusive school environments promote more inclusive attitudes among the majority group of typically developing children, more research in this area is needed. Moreover, as the previous two sections illustrate, children's development of positive intergroup attitudes depends on their understanding of social groups and their motivation to belong to social groups, and it is closely interlinked with socio-moral development (e.g. Killen et al., 2016). Thus, positive outcomes of intergroup contact may depend on children's developmental stage (Raabe & Beelmann, 2011). Still, only few studies on the relation between intergroup contact and social exclusion investigated age-related changes. These studies suggest that intergroup contact is more effective in fourth graders, as compared to seventh graders, in reducing stereotypical explanations for feeling uncomfortable about interracial encounters (Killen, 2007). A possible explanation for this effect might be that adolescents might have a greater awareness of peer group norms and use more social conventional reasons to justify exclusion, as they may want to act in accordance with group norms. In line with this reasoning are the findings of a recent study showing that African American fourth graders with low levels of intergroup contact were more likely to justify the exclusion of a child from a dance scenario because of social conventional reasons (i.e., the child does not fit into the group) as compared to children with high levels of intergroup contact. Thus, intergroup contact decreased their reliance on reasons for group functioning. In contrast, the opposite was found for seventh or tenth graders, whereby higher levels of contact lead to more social-conventional justifications (Ruck et al., 2015). Therefore, intergroup contact may not necessarily reduce stereotypic expectations among early adolescents.

The results of these studies point to possible age-related changes in the effectiveness of intergroup contact that may be due to children's developing socio-moral competencies. Accordingly, Raabe and Beelmann (2011) showed that intergroup contact had a stronger effect on the reduction of 5- to 7-year-old children's prejudice compared younger children, but then did not differ in its relation with decreased prejudice between middle and late childhood. During adolescence, intergroup contact did not moderate prejudice; thereby, it was assumed that contextual influences become more important because adolescents spend more time in peer groups and belonging to a peer group becomes important (Brechwald & Prinstein, 2011; Rubin et al., 2006). In contrast to these findings, Tropp and Prenovost (2008) found no significant differences for the effects regarding intergroup contact with samples of children, adolescents, or adults in their meta-analysis.

A possible reason for these heterogeneous findings might be that these studies did not specifically distinguish between more general forms of intergroup contact and cross-group friendships. Moreover, friendships have a different meaning and serve specific functions for children in different developmental stages (Hartup, 1996; Newcomb & Bagwell, 1995; Rubin et al., 2006). Friendship is defined as a close relationship between two individuals that entails reciprocal affection and shared positive affect (Hartup, 1996; Rubin et al., 2006). While young children's understanding of friendship is limited to playmates, serving mutual enjoyment and entertainment (Parker & Gottman, 1989), children increase in their interpersonal awareness by the end of middle childhood and understand friendship to be an affective, mutual bond (Selman, 1980). As a consequence, friendships become more stable with age (Cairns, Leung, Buchanan, & Cairns, 1995) and the importance of loyalty, trust, and self-disclosure increases (Newcomb & Bagwell, 1995). Adolescent friendships are characterized by even higher levels of self-disclosure and intimacy, whereby shared values, reciprocal understanding, and social support gain more importance (Furman & Buhrmester, 1985; Gummerum & Keller, 2008). Overall, friendships become more significant, as adolescents spend more time with peers and peer groups (Brechwald & Prinstein, 2011). Since friendship facilitates the expression and regulation of affect (Denton & Zarbatany, 1996) and identity development (Erikson, 1968), friendship has an important function in understanding, defining, and changing the self (Parker & Gottman, 1989). Consequently, friendships become highly significant for adolescents' emotional adjustment (Demir & Urberg, 2004), whereby friendship quality in adolescents predicts higher self-worth in adulthood (Bagwell, Newcomb, & Bukowski, 1998).

Taken together, friendships differ behaviorally and conceptually between different developmental periods (Gifford-Smith & Brownell, 2003). Consequently, it is essential to investigate cross-group friendships from a developmental perspective; however, most prior studies on cross-group friendships in childhood and adolescence have either focused on a broad age range or on a particular age group, rather than examining how different aspects of cross-group friendships may predict positive intergroup attitudes at different ages. Moreover, with increasing intimacy and growing emotional bonds, emotional processes, such as trust and sympathy may become a more salient characteristic of friendship quality during adolescence. Therefore, paying closer attention to the role of these emotions for adolescents' cross-group friendships and their development of positive intergroup attitudes may provide insights into *when* and *why* cross-group friendships foster more inclusive attitudes towards out-group members.

3.1.4 The Role of Intergroup Emotions in Cross-Group Friendships and Adolescents' Intergroup Attitudes

In addition to the question of whether cross-group friendships predict more positive attitudes, it is essential to understand the processes that mediate this relation because this knowledge can help us understand how positive intergroup attitudes emerge. Research on the role of cross-group friendships has provided a theoretical framework, proposing different cognitive and affective mechanisms; thereby, most prior studies have focused on the role of increased knowledge about the out-group, reduced anxiety about intergroup contact, and enhanced empathy towards members of the out-group (Pettigrew & Tropp, 2008; Swart, Hewstone, Turner, & Voci, 2011). Meta-analytic evidence suggests that emotions are the most significant mechanisms at work (Pettigrew & Tropp, 2008). Most of this research on emotional processes explaining why cross-group friendships reduce prejudice has been conducted with adults; thus, little is known about the role of intergroup emotions in cross-group friendships among children and adolescents (Aboud & Spears Brown, 2013). As outlined in the previous chapter, developmental changes in the quality and meaning of friendships result in closer affective bonds between children and adolescents with growing age (Gummerum & Keller, 2008; Selman, 1980). Thus, depending on this change in friendship quality, emotions may become more important in explaining changes in intergroup attitudes in late childhood and early adolescence. Moreover, friendships are important means for children and adolescents to acquire interpersonal and social skills, as they become more sensitive towards thoughts and feelings for their friend, and thus increase in their concern for their friends' well-being (Bukowski, 2001). With growing closeness, these interpersonal

processes become more significant; thus, investigating mediators of cross-group friendships should take into account knowledge on friendship development.

Previous studies, albeit few, that have investigated potential mediators of cross-group friendships and the development of early adolescents' intergroup attitudes showed that cross-group friendship can increase intimacy (Turner, Hewstone, & Voci, 2007), self-disclosure, and empathy; and reduce anxiety about intergroup contact (Abbott & Cameron, 2014; Turner et al., 2007). However, most of these studies on the role of emotions in cross-group friendships among children and adolescents have been cross-sectional. Thus, these studies have several methodological shortcomings, as the understanding of developmental trajectories requires longitudinal designs and studying individual change over time (Selig & Preacher, 2009). Although cross-sectional research provides insights into the emergence of positive intergroup attitudes, it cannot explain which factors change adolescents' expression of prejudice or its maintenance (Raabe & Beelmann, 2011). In other words, in order to test assumptions regarding processes, longitudinal designs are warranted. With regard to adolescents' affective experiences, studying how their cross-group friendships may change their emotional experiences may be significant in explaining changes in prejudice development because these emotions influence how they understand and encode social situations; therefore, higher emotional arousal increases the salience of the negative aspects of moral transgressions (Arsenio, Gold, & Adams, 2006). Consequently, focusing on changes in intergroup emotions can provide insight into *why* adolescents with cross-friendships develop more inclusive attitudes towards out-group members.

Taken together, research on the processes of cross-group friendships and the formation of intergroup attitudes in childhood and adolescence can benefit from including knowledge on the formation of friendships. As most research on the role of emotions for the formation of intergroup attitudes has been conducted with adults (e.g., Amodio & Mendoza, 2010), this developmental perspective has been missing. Research that addresses the role of emotions for children's and adolescents' development of intergroup attitudes is scare (Turiel & Killen, 2010). Thus, an integrative theoretical model that explains what mechanisms are at work and when children and adolescents with cross-group friendship develop inclusive intergroup attitudes has yet to be constructed. As children's social relationships are embedded in the social structure of the classroom, the classroom context has to be taken into account when studying children's and adolescents' development of inclusive intergroup attitudes, socio-moral competencies, and peer group inclusivity.

3.2 Research Questions and Theoretical Framework at the Individual Level: The Role of Cross-Group Friendships, Socio-Moral Competencies, and Intergroup Emotions in the Development of Inclusive Intergroup Attitudes (Chapters 2 – 4)

Despite evidence that cross-group friendships can promote positive intergroup attitudes in childhood and adolescence, which may relate to children's peer group inclusivity (e.g., Aboud & Spears Brown, 2013; Tropp & Prenovost, 2008), the previous sections illustrate that the development of peer group inclusivity depends on two different developmental processes: First, children's development of intergroup knowledge and identification (including their social identification with groups, knowledge about stereotypes, intergroup attitudes, and understanding of groups); and second, children's socio-moral development as displayed in their reasoning and emotions about social exclusion (Killen et al., 2016). However, prior research on cross-group friendships has not integrated these two developmental processes. Thus, it remains unclear how these processes interdepend in the prediction of peer group inclusivity. Furthermore, prior research has not taken into account how the development of children's and adolescents' friendships may have different effects on intergroup attitudes. Thus, the question is: Do cross-group friendships equally predict positive intergroup attitudes across development? Lastly, the previous sections make clear that, despite the importance for understanding how positive intergroup attitudes emerge, an integrative theoretical model that explains what mechanisms are at work when children and adolescents with cross-group friendship develop inclusive intergroup attitudes has yet to be constructed.

To address these research gaps, I investigate the following questions:

1. Do friendships between children and adolescents from different social groups relate to more inclusive intergroup attitudes among children and adolescents from majority groups?
2. What is the role of socio-moral competencies in this relationship?
3. How do different aspects of cross-group friendships predict intergroup attitudes during different developmental phases?
4. Are cross-group friendships equally beneficial during late childhood and early adolescence?
5. What are the processes that influence the development of inclusive attitudes of adolescents with cross-group friendships? What is the role of intergroup emotions in this relationship?

To investigate these research questions, I propose an integrative process model (see Figure 3) that focuses on the role of cross-group friendship for promoting more favorable attitudes towards the inclusion of members of different social groups (i.e., children with SEN and immigrant children). In particular, this research investigates how developmental differences moderate the relationship between cross-group friendships and inclusive intergroup attitudes. Based on the integrative approach proposed by the SRD model (Rutland et al., 2010), I extend prior research by investigating the interplay between children's and adolescents' socio-moral competencies and intergroup relations in the development of inclusive intergroup attitudes.

First, I investigate if potential positive consequences of intergroup friendship depend on socio-moral development (see Figure 3, chapter 2). To answer this research question, I specifically focus on early adolescence, as this developmental period is characterized by a strong need for peer group acceptance (Brechwald & Prinstein, 2011; Teichman et al., 2007). Moreover, as early adolescents gain more experience with peer groups, they are more likely to consider aspects of group functioning when reasoning about social exclusion (Gasser et al., 2014; Malti et al., 2012). Group functioning, in turn, may be an important aspect of adolescents' reasoning about peer exclusion in inclusive classrooms, where the inclusion of a child with SEN may interfere with achieving group goals (e.g., the group may not be able to solve a difficult math task if a child with SEN is included) (Gasser et al., 2014). As previously outlined, adolescents' emotions about social exclusion reflect adolescents' understanding and interpretation of the social situation (Killen & Malti, 2015). Thus, studying the role of adolescents' emotions about social exclusion in the relation between cross-group friendships and positive intergroup attitudes provides insight into the role of socio-moral competencies for the formation of positive intergroup attitudes. As illustrated in Figure 3 (see chapter 2), I assume that early adolescents' socio-moral competencies (as represented by their emotions about social exclusion) moderate whether cross-group friendships result in more inclusive intergroup attitudes. Specifically, I expect a stronger positive association between cross-group friendship and adolescents' attitudes, when they consider issues of fairness as more important than issues of group functioning (as reflected in the anticipation of more negative emotions about social exclusion). Conversely, I assume that positive effects from cross-group friendship may not result if adolescents give priority to considerations of group functioning (i.e., report positive emotions when a child with SEN is excluded). This assumption is based on the idea that adolescents' emotions regarding social exclusion reflect which aspects of a

given situation are important to them (e.g., group functioning vs. fairness) (Killen & Malti, 2015).

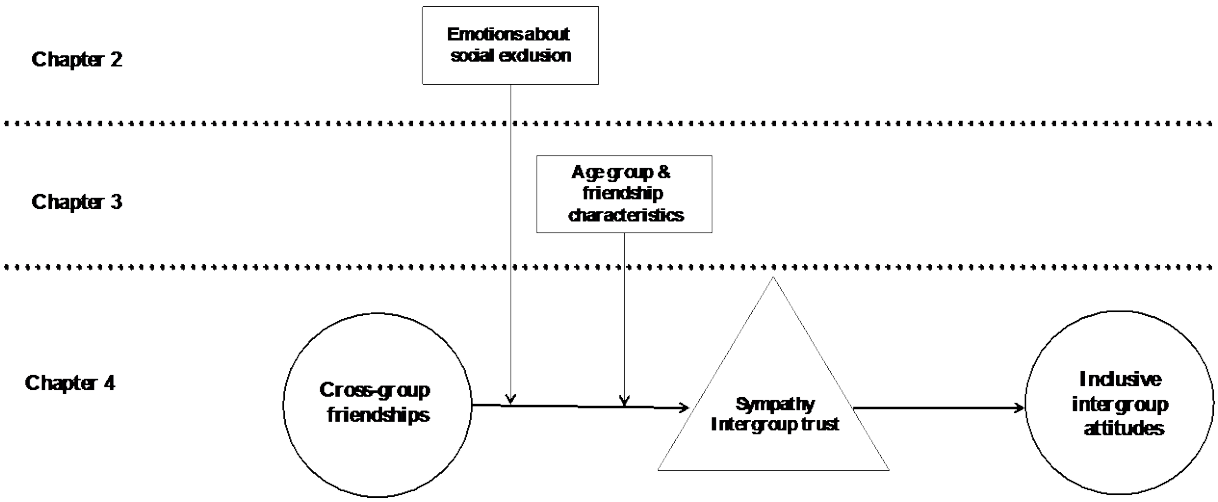


Figure 3. Theoretical framework for investigating the development of inclusive intergroup attitudes

Second, with a focus on the meaning and characteristics of friendships during different developmental periods, I assume that, depending on age and the operationalization of cross-group friendship, different results can be expected, as different friendship characteristics uniquely predict inclusive intergroup attitudes (see Figure 3, chapter 3). Including research on the development of peer relationships, I examine how different aspects of friendships predict children's and adolescents' intergroup attitudes (see Figure 3, chapter 3). Thereby, based on prior research showing how friendships become increasingly characterized by emotional aspects (Gummerum & Keller, 2008; Newcomb & Bagwell, 1995; Selman, 1980), I expect that emotional friendship characteristics may be more predictive for early adolescents' intergroup attitudes than for children's. In contrast, I assume that mutual activities are more predictive for children than for adolescents, as children's friendships are mainly characterized by mutual engagement (e.g., Rubin et al., 2006).

In order to shed more lights on the processes that influence the development of inclusive attitudes of adolescents with cross-group friendships, I specifically investigate the role of intergroup emotions (see Figure 3, chapter 4). As outlined above, friendships become increasingly characterized by emotional aspects, such as trust and emotional bonds (Gummerum & Keller, 2008; Newcomb & Bagwell, 1995; Selman, 1980). Thus, I predict that intergroup emotions mediate the relation between cross-group friendship and intergroup attitudes. Furthermore, as developmental processes are captured by change (Selig & Preacher,

2009), and changing emotions increase the salience of negative aspects of moral transgressions (Arsenio et al., 2006), the model predicts that cross-group friendships lead to a change in adolescents' intergroup emotions, which in turn fosters positive intergroup attitudes (see Figure 3, chapter 4). As most of the research on intergroup emotions has focused on adults (Amodio & Mendoza, 2010), this research can shed light on the processes that lead to more inclusive attitudes in earlier phases of life. Moreover, as most of the research regarding the processes of cross-group friendships has been cross-sectional, I investigate some emotional processes, such as the acquisition of sympathy and trust that may lead to more inclusive attitudes in students with cross-group friendships within a longitudinal design.

Taken together, I develop a theoretical framework (see Figure 3) that integrates findings from literature on children's and adolescents' peer relationships, formation of intergroup attitudes, and socio-moral development. By integrating these different theories from social and developmental psychology, this process model provides a comprehensive understanding of the role of cross-group friendships and children's socio-moral development for peer group inclusivity in inclusive school settings.

4 The Role of Teacher Behavior for Children's Social-Moral Competencies and Peer Group Inclusivity

Teachers are important for children's peer group inclusivity, as their attitudes and behavior shape children's learning environments (e.g., Mikami, Lerner, & Lun, 2010). Social interactions are embedded in these learning environments, and thus, the classroom level needs to be taken into account when studying how different educational practices relate to social participation.

4.1 Theoretical Background and the "Status Quo" of Research in the Field

In order to better understand how different aspects of teacher behavior relate to peer group inclusivity, this dissertation focuses on two aspects of inclusive school environments that may be closely related to the social participation of students with SEN: Classroom norms related to academic achievement and the quality of teacher-student interactions. The theoretical background and current state of research regarding these two aspects of teacher behavior are outlined in the next sections.

4.1.1 The Role of Classroom Norms: Does Competition Accentuate Social Exclusion?

As outlined in chapter 2.1, social participation depends on the composition of the classroom; therefore, the classroom composition in terms of typical group traits or behaviors provides a descriptive norm that informs children how acceptable a certain behavior is. In other words, children who differ from the average classroom behavior may be less socially accepted (e.g., Chang, 2004; Stormshak, Bierman, Bruschi, Dodge, & Coie, 1999). However, recent research findings suggest that social acceptance does not only depend on these descriptive norms, but is also strongly influenced by the value that children or adolescents ascribe to a certain trait or behavior (Dijkstra & Gest, 2015). According to the norm salience approach, the understanding of the value that children place on certain traits or behaviors is reflected in their understanding of the traits and behaviors of children who are seen as highly popular; thus, behaviors that are correlated with high status are mostly evaluated positively and become highly influential (Dijkstra, Lindenberg, Verhulst, Ormel, & Veenstra, 2009). In short, popular children of a classroom represent norms of what is socially desirable, and behaviors that are positively valued by the majority of the students in a classroom relate to the social acceptance of children.

Classrooms in which academic achievement is highly valued, children with low achievement have lower levels of social acceptance as compared to classrooms in which academic achievement is less salient (Dijkstra & Gest, 2015). Thus, if children in a classroom strongly value high academic achievement, children with low academic achievement are at a higher risk of being socially excluded. How salient academic achievement is to children depends on teacher behavior: Classrooms in which teachers favor the most academically talented students are characterized by a low average social preference (e.g., liking) over time as compared to classrooms with teachers who place more value on children's social development. In addition, students at risk (i.e., students with externalizing behaviors) are seen as unpopular by classmates in both types of classrooms, but can become even more excluded over time in classrooms with teachers who highly focus on academic achievement (Mikami, Griggs, Reuland, & Gregory, 2012). Thus, in line with the norm salience approach (Dijkstra et al., 2009), the value that children or adolescents ascribe to academic achievement influences the social standing of children with SEN. These findings emphasize that children do not only use information about how peers rate classmates with low academic achievement, but also use information about the quality of the relationships that these children have with the teacher. In addition to favoring academically talented students, teachers may also place a high value on competition between students. Competition exists when the actions of

individuals impede the attainment of each other's goals while cooperation implies that the actions of individuals support the attainment of joint goals. Cooperation and competition can be conceptualized as a contextual, relational or individual variable, whereby as a contextual variable, they represent norms that are made salient by the teacher (Roseth, Johnson, & Johnson, 2008). Whether teachers value cooperation over competition predicts children's socio-moral development and prosocial behavior (Tichy, Johnson, Johnson, & Roseth, 2010), positive relationships in inclusive classrooms (Johnson & Johnson, 2005) and low levels of victimization and aggression (Choi, Johnson, & Johnson, 2011).

Furthermore, contact between students from different social backgrounds may reduce prejudice in school environments that cultivate a climate of mutual respect and cooperation (Johnson & Johnson, 2005; Miller, Brewer, & Edwards, 1985; Molina & Wittig, 2006). Therefore, cooperation is one of the four conditions for optimal intergroup contact (Allport, 1954), whereby, these conditions i.e., authority support, interdependence, acquaintance potential, and equal status, have revealed the strongest effect sizes for the development of positive intergroup attitudes among children and adolescents (Tropp & Prenovost, 2008). Thus, the kind of classroom environment that teachers create significantly influences students' development of inclusive intergroup attitudes. In line with these results are findings demonstrating higher rates of cross-ethnic friends in cooperative classrooms (Ng & Lee, 1999) and findings showing that minority children in cooperative learning classrooms are rated as more popular compared to classrooms with more competitive norms (Oortwijn, Boekaerts, Vedder, & Fortuin, 2008).When working on a task, interdependences between children from different social groups are associated with lower bias towards out-group members. Thereby, collaborative norms promote children's social identification with a common in-group identity (i.e., a superordinate identity, such as the school class or the school). Children who identify with a common in-group in turn are less biased in their evaluation of out-group members, as they perceive out-group members as part of the common in-group (Gaertner, Mann, Dovidio, Murrell, & Pomare, 1990). In summary, cooperation and interdependence in inclusive classrooms are predictive of peer group inclusion, as these structural features of the learning environment represent prescriptive norms on how to treat others.

Theories on children's social development emphasize that, when making decisions about the inclusion of out-group members, group norms are taken into consideration (Abrams et al., 2003). According to the Developmental Subjective Group Dynamics (DSGD) model (Abrams et al., 2003), children coordinate their knowledge about in-group norms with their

knowledge about out-group norms in order to decide whom to include in peer group activities. As the goal is to enhance in-group identity, children are very sensitive to group norms when deciding whom to include: The more experienced children are with groups, the better they understand group norms. Furthermore, with the development of differentiation skills between individuals within groups and between social groups, children become more sensitive to influences of social norms. These group norms are associated with particular identities and guide social actions (Bennett, 2014). Supporting these assumptions, prior research shows that norms of inclusion can increase the positivity of children's ratings of out-group members during middle childhood (e.g., Nesdale & Lawson, 2011; Nesdale, 2008). For inclusive classrooms, this means that older children become more sensitive to the social context of the classroom. Furthermore, with the transition to adolescence, individuals have a higher awareness of status dynamics (Cillessen & Rose, 2005); thus they become more sensitive to norm salience and to characteristics of popular students.

Taken together, competitive classroom norms may have a stronger negative impact on peer exclusion during early adolescence. Additionally, with regard to socio-moral development, while older children become more sensitive to norms of fairness, they also pay more attention to social-conventional norms (Gasser et al., 2014). Thus, adolescents may decide to exclude a child with SEN if his or her participation in the group would impede with optimal group functioning. In contexts that pose a high value on academic achievement and foster competitive classrooms norms, this tendency may become even more accentuated, as the pressure to perform increases. Thus, studying inclusion of students with SEN with regards to competitive social norms provides a more detailed insight into how older children and early adolescents understand and prioritize different norms of being inclusive or being in a well-functioning group.

As outlined above, teachers can accentuate the social exclusion of students with high levels of externalizing behavior if they favor academically high performing students (Mikami et al., 2012). Therefore, teacher-student interactions can have an impact on the social standing of students with SEN.

4.1.2 Teacher-Student Interactions: The Role of Emotional Support in Inclusive School Environments

In addition to the goal of enhancing children's social participation, inclusive classroom provide opportunities for positive social and emotional development (UN, 2006). As outlined in the previous chapters, social participation has a significant impact on children's and adolescents' social and emotional adjustment, even when controlling for children's behavioral

and socio-emotional competencies (Bierman, 2004; Hodges et al., 1999; Ladd et al., 1997). However, children do not only form relationships with peers, but also with their teachers (Birch & Ladd, 1997). Positive teacher-student relationships can provide emotional security for children and thereby enhance their learning engagement and their social and behavioral competences (Pianta, 1999). Thus, it is not surprising that teacher-student relationships longitudinally predict children's school adjustment (i.e., their grades, their behavioral and social adaption; Hamre & Pianta, 2001).

During adolescence, positive teacher-student relationships predict adolescent's attitudes towards school, their motivation, and their academic self-concept (Wentzel, 1998). However, most of this research on student-teacher relationships has relied on teacher ratings of their relationships with students (Murray, Murray, & Waas, 2008), whereby the teacher perspective does not necessarily reflect students' experiences. How students perceive their teachers may have important implications for their social-emotional and academic adjustment (Suldo et al., 2009; Wentzel, Battle, Russell, & Looney, 2010). When studying student's perceptions of their teachers, research has focused on justice and care, as these two dimensions reflect two key dimensions of teaching quality (Gasser & Althof, in press; Nucci, 2008; Pianta & Hamre, 2009). The results of these prior studies suggest that, with regards to justice, if adolescents perceive high teacher justice, they achieve better grades and report less school distress compared to adolescents who believe that teachers treat them unfairly (Peter, Dalbert, Kloeckner, & Radant, 2013). Moreover, in classrooms where students perceive higher levels of teacher justice, they report less negative peer interactions (Donat, Umlauft, Dalbert, & Kamble, 2012).With regards to care, if students feel that the teacher does not care about them this may have negative implications for their development (Birch & Ladd, 1997; Hamre & Pianta, 2001; Pianta, 1999).

Taken together, fair and caring school environments may reduce negative treatment among students, such as social exclusion. Thus, it is important to better understand which aspects of the classroom environment foster perceived teacher fairness and care among students. However, most of the previous research has focused on developmental consequences of perceived teacher justice and care. Therefore, a multi-informant framework is warranted that investigates antecedents of students' perceptions of their teachers as fair and caring.

How students perceive their teacher may depend on how the teacher structures the classroom environment. In order to develop a framework for how teacher behavior shapes students experiences, Pianta and Hamre (2009) emphasized an interactional approach,

whereby the focus was not just on the teacher, but on social interactions between teachers and students, and interactions between students. Based on extensive studies of these social interactions in classrooms, the two authors proposed a theoretical framework to observe and classify these interactions into three main domains (i.e., CLASS [Classroom Assessment Scoring System]): Emotional support, classroom organization, and instructional support. If classroom interactions are characterized by high emotional support, the climate in the classroom is highly positive, whereby teachers aim at communicating in a warm and respectful way with their students. In addition, the teacher is highly aware of and responsive to students' social and emotional needs, provides opportunities for autonomy, and encourages students' ideas. The other two aspects of teacher-student interactions indicate how well classrooms are organized and managed (e.g., maximizing learning time by clear rules), and express the quality of how teachers instruct their students (e.g., whether these instructions help students reflect upon their own thinking and acquire an in-depth understanding). These interactions reflect the average experience of a student in a classroom (Pianta, Hamre, & Mintz, 2012); thus, a teacher's typical level of emotional support represents a form of classroom climate (e.g., high emotional support reflects a warm climate; Hughes, Zhang, & Hill, 2006).

Emotionally supportive teacher-student interactions as characterized by the CLASS framework are conceptually close to teacher justice and teacher care. Caring teachers pay attention to students' emotional needs and their needs for autonomy (Wentzel, 1998), and children rate their teachers as just if they feel accepted and valued (Vieno, Perkins, Smith, & Santinello, 2005). Thus, in classrooms where the interactions between teachers and students are characterized by high emotional support, students may perceive their individual relationship with their teacher as more caring and just than in classrooms where teachers are less supportive. In line with this reasoning, research findings indicate that in classrooms where teacher-student interactions are characterized by high emotional support, lower levels relational aggression are observed among peers (Merritt, Wanless, Rimm-Kaufman, Cameron, & Peugh, 2012). Moreover, emotional support provided by teachers has significant implications for the development of students' prosocial behavior (Curby, Brock, & Hamre, 2013; Luckner & Pianta, 2011; Mashburn et al., 2008) and their social participation (Mikami et al., 2012). Consequently, emotional support is highly predictive of students' social adjustment since emotionally supportive relationships can have a protective role for students at risk for poor academic outcomes (Baker, 2006; Curby, Rudasill, Edwards, & Pérez-Edgar, 2011; Hamre & Pianta, 2005; Johnson, Seidenfeld, Izard, & Kobak, 2013). Moreover, the

quality of teacher-student interactions also relates to students' social participation. For example, students with high levels of externalizing behavior who visit classrooms with high emotional support have more chances to change their social preference over time, while these students are highly at risk for social exclusion in classrooms where teachers emphasize the value of academic achievement (Mikami et al., 2012). However, most of this research on the potentially protective role of teacher-student interactions for students at risk has focused on students with externalizing behavior; little is know about the role of high quality teacher-student relationships for students with low levels of academic achievement (Baker, 2006). Findings from a study that specifically investigated the quality of the relationships between students with low academic achievement and their teachers revealed that close relationships were more beneficial for students with SEN (i.e., significant academic problems) than for their classmates without SEN (Baker, 2006). However, this research was based on teacher-rated relationship quality; thus, how students with SEN perceive the relationship with their teacher was not investigated. Still, as students with SEN have a higher risk for negative socio-emotional and academic adjustment if they are in poor learning environments (Bauminger & Kimhi-Kind, 2008; Forness & Kavale, 1996; Hunt, Soto, Maier, & Doering, 2003; Powell, 2006), and teacher perceptions of being just and caring are important for social adjustment (e.g., Peter et al., 2013; Suldo et al., 2009), it is important to understand how teacher-student interactions affect their social perceptions of their teachers.

4.2 Research Questions and Theoretical Framework at the Classroom Level: The Role of Teacher Behavior for Students' Socio-Moral Competencies and Socio-Emotional Adjustment (Chapters 5 and 6)

The previous section illustrates that how teachers structure the classroom environment can have a significant impact on children's and adolescents' social experiences. In particular, classrooms in which teachers endorse competitive norms may pose a special risk for the exclusion of students with SEN because competitive norms may increase rates of victimization (Choi et al., 2011). However, despite the importance of such competitive norms for inclusive classrooms, the question of how competitive classroom norms shape older children's socio-moral reasoning in inclusive classrooms has not been previously studied. Thus, it remains unclear how children in inclusive classrooms prioritize moral versus social-conventional concerns when their teacher strongly emphasizes academic achievement and competition.

Furthermore, as outlined in section 4.1.2, how teachers structure the classroom environment may not only predict children's socio-moral competencies, but also their socio-emotional and academic adjustment (e.g., Luckner & Pianta, 2011). The quality of teacher-student interactions within a classroom reveals important information about the classroom climate (Hughes et al., 2006), whereby children in classrooms with teachers who are emotionally supportive show lower levels of relational aggression (Merritt et al., 2012), and higher levels of prosocial behavior (e.g., Luckner & Pianta, 2011; Mashburn et al., 2008). Thus, students in classrooms with emotionally supportive teachers may not only be more inclusive, but may also feel more valued, accepted, and treated with justice by their teacher. Perceived teacher care and justice reflect important dimensions of how students perceive the relationship quality with their teacher (Nucci, 2008; Pianta & Hamre, 2009). Positive teacher-student relationships, in turn, have significant implications for children's socio-emotional and academic development, as they are positively related to children's learning engagement and their social and behavioral competences (Pianta, 1999). However, as outlined in the previous chapter, most of the research has focused on the developmental consequences of children's teacher perceptions. Thus, it still has to be determined how the classroom environment affects students' perception of their relationship quality with their teacher. Furthermore, as students with SEN have a higher risk for negative socio-emotional and academic adjustment if they are in poor learning environments (e.g., Hunt et al., 2003), it is essential to discover which aspects of the classroom environment determine the perception of SEN students of their teacher.

The three main research questions regarding the classroom environment in inclusive school classes can be summarized as follows:

1. How do competitive classroom norms influence students' socio-moral competencies and their exclusion behavior?
2. What is the role of the emotional quality of teacher-student interactions for students' perceptions of their teachers as fair and caring?
3. Do emotionally supportive classroom environments serve a protective role for students with SEN?

In order to answer the first question on how competitive norms influence early adolescents' socio-moral reasoning, I assume that competitive norms increase the salience of children's and adolescents' social-conventional considerations when reasoning about social exclusion of children with SEN (see Figure 4, chapter 5). This increased salience of social-conventional considerations may result from several processes: First, early adolescents

become very sensitive to status differences (Cillessen & Rose, 2005), and – according to the norm salience approach (Dijkstra et al., 2009) – may be more likely to value high academic achievement if the teacher strongly endorses competition among students. Second, in classrooms with competitive norms, students may be more likely to identify with high-achieving (i.e., high-status) groups; also competition between groups is known to enhance in-group bias (Miller et al., 1985). Third, early adolescents become more experienced with social groups and more sensitive to group norms (Abrams et al., 2003); thus, they may be particularly sensitive to aspects of group functioning when reasoning about social exclusion (e.g., Gasser et al., 2014). Taken together, if students are expected to perform, they may thus even more readily favor well-functioning groups over moral considerations such as fairness. Therefore, competitive norms may have a negative influence on students' moral reasoning, and as a results, students with SEN may be more frequently excluded in classrooms with competitive norms.

Taken together, with regard to contextual influences on students' social experiences, chapter 5 of this dissertation provides a more detailed insight into how the classroom context influences students' considerations of being inclusive or being in a well-functioning group, which may represent common experiences for students in inclusive classrooms.

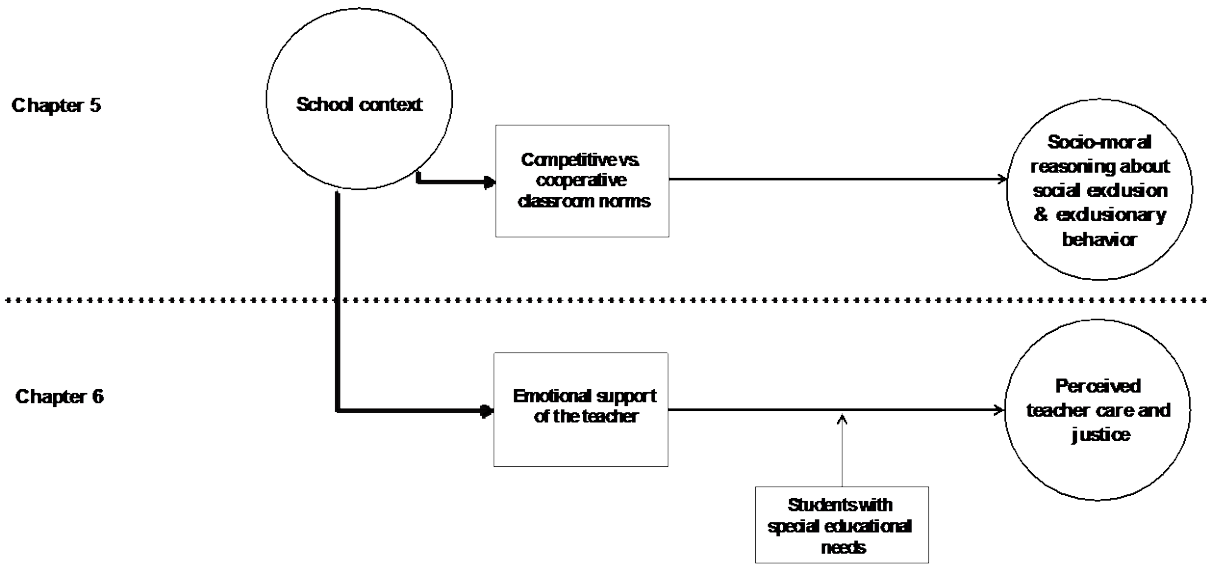


Figure 4. Theoretical framework on the role of teacher behavior for students' socio-moral competencies and socio-emotional adjustment

Regarding the second and third question on how the classroom context affects students' social experiences, I hypothesize that emotionally supportive teachers create a caring and warm classroom climate, which positively relates to how students perceive the relationship

quality with their teacher (see Figure 4, chapter 6). Since caring teachers pay more attention to student's emotional needs (Wentzel, 1998) and children rate their teachers as just if they feel accepted and valued (Vieno et al., 2005), I specifically predict that children perceive their teacher as more caring and just in classrooms with high emotional support, as compared to classroom with low emotional support. Thus, this dissertation extends prior research by shedding light on the antecedents of children's teacher perceptions that characterize high-quality aspects of teacher-student relationships (i.e., care and justice). Moreover, as most prior research has investigated teacher-student relationships from the perspective of the teacher (Murdock, Anderman, & Hodge, 2000), this dissertation uses a multi-informant approach to investigate how observed teacher-student interactions that reflect the climate of a classroom relate to children's individual perceptions.

Additionally, based on prior findings that emphasized the protective role of high emotionally supportive classrooms for children at risk (e.g., Baker, 2006; Hamre & Pianta, 2005), I assume teacher emotional support serves as a protective factor for how just and caring students with SEN perceive their teacher (see Figure 4, chapter 6). Therefore, this research extends prior studies that have mainly focused on students at risk in terms of low socio-economic status or high externalizing behavior (e.g., Baker, 2006; Hamre & Pianta, 2005) in order to understand how teacher-student interactions affect how students with SEN perceive their teachers (based on moral traits such as fairness and care).

In summary, studying classroom norms and teacher-student interactions in inclusive classrooms may provide important information on the ways in which classrooms would ideally need to be designed in order to enhance the social participation of all the students.

5 Overview of the Methodological Design

This section includes information on the methodological design of the two larger studies that provide the basis for the different chapters of this dissertation. These two studies were conducted in inclusive school classes in Switzerland.

In study 1, 439 children of 20 inclusive school classes from grade one to grade six in the Canton of Zurich were interviewed in face-to face interviews regarding their social relationships in school and their inclusive intergroup attitudes. Table 1 provides an overview of the specific measures assessed in this study.

Table 1. *Overview of the measures of study 1*

Study 1				
Chapter	*Sample*	*Independent variables*	*Moderator / Mediator Variables*	*Dependent variables*
1	439 students with and without SEN, grades 1-6	1. Different aspects of social participation: - Popularity - Mutual friendships - Peer group centrality 2. Classroom diversity	Special educational needs: - None - Mild - Moderate - Severe	Social participation in peer relationships
3	309 Swiss students, grades 1-6	Cross-group friendships: - Mutual activities - Mutual trust	Age group: - Late childhood - Early adolescence	Attitudes towards the inclusion of immigrant students

Study 2 was conducted within the project "Social and moral judgments regarding social exclusion of children with learning disabilities and behavioral difficulties: The role of teachers and peers", which was financed by the Swiss National Foundation. The main goal of this project was to determine which classroom conditions in inclusive school classes predict peer group inclusion in early adolescence. In this short-term longitudinal study, 61 fifth-grade school classes from different Cantons in Switzerland participated in the first wave in spring 2014, and 54 sixth-grade classes took part in the second wave of the study, one year later. Students filled in a questionnaire with measures of their social relationships, socio-moral development, and teacher perceptions. In addition, teachers answered questions regarding their teaching practices and rated each student in terms of his or her academic and socio-emotional development. In addition to questionnaire and social network data, observational data on teacher-student interactions were collected during the first wave. Table 2 provides an overview of the specific measures assessed in this study.

Table 2. *Overview of the measures of study 2*

Study 2				
Chapter	*Sample*	*Independent variables*	*Moderator / Mediator Variables*	*Dependent variables*
2	945 students without SEN of 70 classrooms	Closeness of cross-group friendships	Emotions about social exclusion	Attitudes towards the inclusion of students with SEN
4	T1: 923 students without SEN of 61 classrooms T2: 770 students without SEN of 54 classrooms	Number of cross-group friends	Individual changes in: - Intergroup trust - Sympathy	Attitudes towards the inclusion of students with SEN
5	T1: 1209 students of 61 classrooms T2: 1009 students of 54 classrooms	1. Exclusion target 2. Social context	1. Changes over time 2. Competitive vs. cooperative classroom norms	1. Exclusionary behavior 2. Social reasoning about social exclusion
6	T1: 1209 students of 61 classrooms T2: 1009 students of 54 classrooms	Observed teaching practices: - Emotional support - Instructional support - Classroom organization	1. Changes over time 2. Special needs status	1. Perceived teacher justice 2. Perceived teacher care

Taken together, this research employs a multi-method, multi-informant design using questionnaire data of teachers and students, social network data, and observational data. This mixed study design considers students' individual development in the larger context of their peer relationships and classroom context.

References

Abbott, N., & Cameron, L. (2014). What makes a young assertive bystander? The effect of intergroup contact, empathy, cultural openness, and in-group bias on assertive bystander intervention intentions. *Journal of Social Issues, 70*, 167–182. doi: 10.1111/josi.12053

Aboud, F. E., Mendelson, M. J., & Purdy, K. T. (2003). Cross-race peer relations and friendship quality. *International Journal of Behavioral Development, 27*, 165–173. doi: 10.1080/01650250244000164

Aboud, F. E., & Spears Brown, C. (2013). Positive and negative intergroup contact among children and its effect on attitudes. In G. Hodson & M. Hewstone (Eds.), *Advances in intergroup contact* (pp. 176–199). doi: 10.4324/9780203095461

Abrams, D., Hogg, M., & Marques, J. (2005). *The social psychology of inclusion and exclusion.* New York, NY: Psychology Press.

Abrams, D., & Rutland, A. (2008). The development of subjective group dynamics. In S. R. Levy & M. Killen (Eds.), *Intergroup relations and attitudes in childhood through adulthood* (pp. 47–65). Oxford, UK: Oxford University Press.

Abrams, D., Rutland, A., & Cameron, L. (2003). The development of subjective group dynamics: Children's judgments of normative and deviant in-group and out-group individuals. *Child Development, 74*, 1840–1856. doi: 10.1046/j.1467-8624.2003.00641.x

Ainscow, M. (2009). Developing inclusive education systems: What are the levers for change? In P. Hick & G. Thomas (Eds.), *Inclusion in diversity and education: Vol. 2. Developing inclusive schools and school systems* (pp. 1–13). London: SAGE Publications.

Allport, G. W. (1954). *The nature of prejudice.* Reading, MA: Addison-Wesley Publishing Company.

Amodio, D. M., & Mendoza, S. A. (2010). Implicit intergroup bias: Cognitive, affective, and motivational underpinnings. In B. Gawronski & B. K. Payne (Eds.), *Handbook of implicit social cognition: Measurement, theory, and applications* (pp. 353–374). New York, NY: Guilford Press.

Arsenio, W. F., Gold, J., & Adams, E. (2006). Children' s conceptions and displays of moral emotions. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development* (pp. 581–609). Mahwah, NJ: Erlbaum.

Avramidis, E. (2010). Social relationships of pupils with special educational needs in the mainstream primary class: Peer group membership and peer- assessed social behaviour.

European Journal of Special Needs Education, 25, 413–429. doi: 10.1080/08856257.2010.513550

Bagwell, C. L., Newcomb, A. F., & Bukowski, W. M. (1998). Preadolescent friendship and peer rejection as predictors of adult adjustment. *Child Development, 69*, 140–153. doi: 10.1111/j.1467-8624.1998.tb06139.x

Baker, J. A. (2006). Contributions of teacher–child relationships to positive school adjustment during elementary school. *Journal of School Psychology, 44*, 211–229. doi: 10.1016/j.jsp.2006.02.002

Bates, H., McCafferty, A., Quayle, E., & McKenzie, K. (2015). Review: Typically-developing students' views and experiences of inclusive education. *Disability and Rehabilitation, 37*, 1929–1939. doi: 10.3109/09638288.2014.993433

Bauminger, N., & Kimhi-Kind, I. (2008). Social information processing, security of attachment, and emotion regulation in children with learning disabilities. *Journal of Learning Disabilities, 41*, 315–332. doi: 10.1177/0022219408316095

Bennett, M. (2014). Intergroup social exclusion in childhood: Forms, norms, context, and social identity. *Journal of Social Issues, 70*, 183–195. doi: 10.1111/josi.12054

Bennett, M., & Sani, F. (2004). *The development of the social self.* Hove, East Sussex: Psychology Press.

Bundesamt für Statistik. (2015). *Lernende nach Bildungsstufe und Bildungstyp* [Students according to level and type of education]. Retrieved from http://www.bfs.admin.ch/bfs/portal/de/index/themen/15/02/data/blank/02.html

Bierman, K. L. (2004). *Peer rejection: Developmental processes and intervention strategies.* New York, NY: Guilford Press.

Birch, S. H., & Ladd, G. W. (1997). The teacher-child relationship and children's early school adjustment. *Journal of School Psychology, 35*, 61–79. doi: 10.1016/S0022-4405(96)00029-5

Bless, G. (2007). *Zur Wirksamkeit der Integration* [About the effectiveness of integration]. Bern: Haupt.

Brechwald, W. A., & Prinstein, M. J. (2011). Beyond homophily: A decade of advances in understanding peer influence processes. *Journal of Research on Adolescence, 21*, 166–179. doi: 10.1111/j.1532-7795.2010.00721.x

Brenick, A., & Killen, M. (2014). Moral judgments about Jewish-Arab intergroup exclusion: The role of cultural identity and contact. *Developmental Psychology, 50*, 86–99. doi: 10.1037/a0034702

Bukowski, W. M. (2001). Friendship and the worlds of childhood. In D. W. Nangle & C. A. Erdley (Eds.), *The role of friendship in psychological adjustment: Vol. 91. New directions for child and adolescent development* (pp. 93–106). San Francisco: Jossey-Bass.

Byrne, D. (1971). *The Attraction Paradigm*. New York, NY: Academic Press.

Cairns, R. B., Leung, M., Buchanan, L., & Cairns, B. D. (1995). Friendships and social networks in childhood and adolescence: Fluidity, reliability, and interrelations. *Child Development, 66*, 1330–1345. doi: 10.2307/1131650

Chang, L. (2004). The role of classroom norms in contextualizing the relations of children's social behaviors to peer acceptance. *Developmental Psychology, 40*, 691–702. doi: 10.1037/0012-1649.40.5.691

Choi, J., Johnson, D. W., & Johnson, R. T. (2011). Relationships among cooperative learning experiences, social interdependence, children's aggression, victimization, and prosocial behaviors. *Journal of Applied Social Psychology, 41*, 976–1003. doi: 10.1111/j.1559-1816.2011.00744.x

Cillessen, A. H. N., & Rose, A. J. (2005). Understanding popularity in the peer system. *Current Directions in Psychological Science, 14*, 102–105. doi: 10.1111/j.0963-7214.2005.00343.x

Crystal, D. S., Killen, M., & Ruck, M. (2008). It is who you know that counts: Intergroup contact and judgments about race-based exclusion. *British Journal of Developmental Psychology, 26*, 51–70. doi: 10.1348/026151007X198910

Curby, T. W., Brock, L. L., & Hamre, B. K. (2013). Teachers' emotional support consistency predicts children's achievement gains and social skills. *Early Education & Development, 24*, 292–309. doi: 10.1080/10409289.2012.665760

Curby, T. W., Rudasill, K. M., Edwards, T., & Pérez-Edgar, K. (2011). The role of classroom quality in ameliorating the academic and social risks associated with difficult temperament. *School Psychology Quarterly, 26*, 175–188. doi: 10.1037/a0023042

Davies, K., Tropp, L. R., Aron, A., Pettigrew, T. F., & Wright, S. C. (2011). Cross-group friendships and intergroup attitudes: A meta-analytic review. *Personality and Social Psychology Review, 15*, 332–351. doi: 10.1177/1088868311411103

Demir, M., & Urberg, K. A. (2004). Friendship and adjustment among adolescents. *Journal of Experimental Child Psychology, 88*, 68–82. doi: 10.1016/j.jecp.2004.02.006

Denton, K., & Zarbatany, L. (1996). Age differences in support processes in conversations between friends. *Child Development, 67*, 1360-1373. doi: 10.2307/1131705

Dijkstra, J. K., & Gest, S. D. (2015). Peer norm salience for academic achievement, prosocial behavior, and bullying: Implications for adolescent school experiences. *Journal of Early Adolescence, 35*, 79–96. doi: 10.1177/0272431614524303

Dijkstra, J. K., Lindenberg, S., Verhulst, F. C., Ormel, J., & Veenstra, R. (2009). The relation between popularity and aggressive, destructive, and norm-breaking behaviors: Moderating effects of athletic abilities, physical attractiveness, and prosociality. *Journal of Research on Adolescence, 19*, 401–413. doi: 10.1111/j.1532-7795.2009.00594.x

Donat, M., Umlauft, S., Dalbert, C., & Kamble, S. V. (2012). Belief in a just world, teacher justice, and bullying behavior. *Aggressive Behavior, 38*, 185–193. doi: 10.1002/ab.21421

Dovidio, J. F., Hewstone, M., Glick, P., & Esses, V. M. (2010). Prejudice, stereotyping and discrimination: Theoretical and empirical overview. In J. F. Dovidio, M. Hewstone, P. Glick, & V. M. Esses (Eds.), *The SAGE handbook of prejudice, stereotyping and discrimination* (Vol. 80, pp. 3–28). doi: 10.4135/9781446200919.n1

Eberwein, H., & Mand, J. (2008). Einleitung: Integration als pädagogische Aufgabe [Introduction: Integration as a pedagogical task]. In H. Eberwein & J. Mand (Eds.), *Integration konkret. Begründung, didaktische Konzepte, inklusive Praxis* [Integration concrete. Justification, didactical conceptions, and inclusive practice] (S. 7–14). Bad Heilbrunn: Julius Klinkhardt Verlag.

Ellinger, S., & Stein, R. (2012). Effekte inklusiver Beschulung: Forschungsstand im Förderschwerpunkt emotionale und soziale Entwicklung [Effects of inclusive education: Current state of research for students with social-emotional problems]. *Empirische Sonderpädagogik, 4*, 85–109.

Erikson, E. H. (1968). Identity: Youth and crisis. New York, NY: Norton & Company Ltd.

Farrell, P. (2000). The impact of research on developments in inclusive education. *International Journal of Inclusive Education, 4*, 153–162. doi: 10.1080/ 136031100284867

Feddes, A. R., Noack, P., & Rutland, A. (2009). Direct and extended friendship effects on minority and majority children's interethnic attitudes: A longitudinal study. *Child Development, 80*, 377–390. doi: 10.1111/j.1467-8624.2009.01266.x

Forness, S. R., & Kavale, K. A. (1996). Treating social skill deficits in children with learning disabilities: A meta-analysis of the research. *Learning Disability Quarterly, 19*, 2-13. doi: 10.2307/1511048

Furman, W., & Buhrmester, D. (1985). Children's perceptions of the personal relationships in their social networks. *Developmental Psychology, 21*, 1016–1024. doi: 10.1037/0012-1649.21.6.1016

Gaertner, S. L., Mann, J. a., Dovidio, J. F., Murrell, A. J., & Pomare, M. (1990). How does cooperation reduce intergroup bias? *Journal of Personality and Social Psychology, 59*, 692–704. doi: 10.1037/0022-3514.59.4.692

Garrote, A. (2016). Soziale Teilhabe von Kindern in inklusiven Klassen [Social participation of children in inclusive classrooms]. *Empirische Pädagogik, 3*0, 67–80.

Gasser, L., & Althof, W. (in press). Learning of moral and ethical issues in teacher education based on cognitive theories of moral reasoning and behavior (developmental views). In D. J. Candidin & J. Husu (Eds.), *International handbook of research in teacher education.* Thousand Oaks, CA: Sage Publications.

Gasser, L., Chilver-Stainer, J., Buholzer, A., & Perrig-Chiello, P. (2012). Soziales und moralisches Denken von Kindern über den Ein- und Ausschluss behinderter Kinder [Children's social and moral reasoning about inclusion and exclusion of disabled children]. *Zeitschrift für Pädagogische Psychologie, 26*, 031–042. doi: 10.1024/1010-0652/a000058

Gasser, L., Malti, T., & Buholzer, A. (2013). Children' s moral judgments and moral emotions following exclusion of children with disabilities: Relations with inclusive education, age, and contact intensity. *Research in Developmental Disabilities, 34*, 948–958. doi: 10.1016/j.ridd.2012.11.017

Gasser, L., Malti, T., & Buholzer, A. (2014). Swiss children's moral and psychological judgments about inclusion and exclusion of children with disabilities. *Child Development, 85*, 532–548. doi: 10.1111/cdev.12124

Gest, S. D., Graham-Bermann, S. A, & Hartup, W. W. (2001). Peer experience: Common and unique features of number of friendships, social network centrality, and sociometric status. *Social Development, 10*, 23–40. doi: 10.1111/1467-9507.00146

Gifford-Smith, M. E., & Brownell, C. A. (2003). Childhood peer relationships: Social acceptance, friendships, and peer networks. *Journal of School Psychology, 41*, 235–284. doi: 10.1016/S0022-4405(03)00048-7

Grütter, J., & Meyer, B. (2014). Intergroup friendship and children's intentions for social exclusion in integrative classrooms: The moderating role of teachers' diversity beliefs. *Journal of Applied Social Psychology, 44*, 481–494. doi: 10.1111/jasp.12240

Gummerum, M., & Keller, M. (2008). Affection, virtue, pleasure, and profit: Developing an understanding of friendship closeness and intimacy in western and Asian societies. *International Journal of Behavioral Development, 32*, 218–231. doi: 10.1177/0165025408089271

Haeberlin, U., Bless, G., Moser, U., & Klaghofer, R. (2003). *Die Integration von Lernbehinderten* [Integration of students with learning disabilities]. Bern: Haupt.

Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 7*2, 625–638. doi: 10.1111/1467-8624.00301

Hamre, B. K., & Pianta, R. C. (2005). Can instructional and emotional support in the first-grade classroom make a difference for children at risk of school failure? *Child Development, 76*, 949–967. doi: 10.1111/j.1467-8624.2005.00889.x

Hartup, W. W. (1996). The company they keep: Friendships and their developmental significance. *Child Development, 67*, 1–13. doi: 10.1111/1467-8624.ep9602271141

Hodges, E. V. E., Boivin, M., Vitaro, F., & Bukowski, W. M. (1999). The power of friendship: Protection against an escalating cycle of peer victimization. *Developmental Psychology, 35*, 94–101. doi: 10.1037/0012-1649.35.1.94

Horn, S. S. (2003). Adolescents' reasoning about exclusion from social groups. *Developmental Psychology, 39*, 71–84. doi: 10.1037/0012-1649.39.1.71

Huber, C. (2009). Soziale Ausgrenzung in der Integration von Schülern mit sonderpädagogischem Förderbedarf: Zusammenhang von Persönlichkeit, Gruppenheterogenität und sozialer Ausgrenzung [Beyond the Pilotprojekt: Social rejection and school integration: A survey of the interrelationship between personal factors, group-heterogeneity and social rejection of children with special educational needs]. *Empirische Pädagogik, 23*, 170–190.

Hughes, J. N., Zhang, D., & Hill, C. R. (2006). Peer assessments of normative and individual teacher-student support predict social acceptance and engagement among low-achieving children. *Journal of School Psychology, 43*, 447–463. doi: 10.1016/j.jsp.2005.10.002

Hunt, P., Soto, G., Maier, J., & Doering, K. (2003). Collaborative teaming to support students at risk and students with severe disabilities in general education classrooms. *Exceptional Children, 69*, 315–332. doi: 10.1177/001440290306900304

Johnson, D. W., & Johnson, R. T. (2005). New developments in social interdependence theory. *Genetic, Social, and General Psychology Monographs, 131*, 285–358. doi: 10.3200/MONO.131.4.285-358

Johnson, S. R., Seidenfeld, A. M., Izard, C. E., & Kobak, R. (2013). Can classroom emotional support enhance prosocial development among children with depressed caregivers? *Early Childhood Research Quarterly, 28*, 282–290. doi: 10.1016/j.ecresq.2012.07.003

Killen, M. (2007). Children's social and moral reasoning about exclusion. *Current Directions in Psychological Science, 16*, 32–36. doi: 10.1111/j.1467-8721.2007.00470.x

Killen, M., Elenbaas, L., & Rutland, A. (2016). Balancing the fair treatment of others while preserving group identity and autonomy. *Human Development, 58*, 253–272. doi: 10.1159/000444151

Killen, M., & Malti, T. (2015). Moral judgments and emotions in contexts of peer exclusion and victimization. *Advances in Child Development and Behavior, 48*, 249–276. doi: 10.1016/bs.acdb.2014.11.007

Killen, M., Mulvey, K. L., & Hitti, A. (2013). Social exclusion in childhood: A developmental intergroup perspective. *Child Development, 84*, 772–790. doi: 10.1111/ cdev.12012

Killen, M. & Rutland, A. (2011). *Children and social exclusion: Morality, prejudice and group identity.* doi: 10.1002/9781444396317

Killen, M., Rutland, A., Abrams, D., Mulvey, K. L., & Hitti, A. (2013). Development of intra- and intergroup judgments in the context of moral and social-conventional norms. *Child Development, 84*, 1063–1080. doi: 10.1111/cdev.12011

Killen, M., & Stangor, C. (2001). Children's social reasoning about inclusion and exclusion in gender and race peer group contexts. *Child Development, 72*, 174–186. doi: 10.1111/1467-8624.00272

Koster, M., Nakken, H., Pijl, S. J., & van Houten, E. (2009). Being part of the peer group: A literature study focusing on the social dimension of inclusion in education. *International Journal of Inclusive Education, 13*, 117–140. doi: 10.1080/13603110701284680

Ladd, G. W., Kochenderfer, B. J., & Coleman, C. C. (1997). Classroom peer acceptance, friendship, and victimization: Distinct relational systems that contribute uniquely to children's school adjustment? *Child Development, 6*8, 1181. doi: 10.2307/1132300

Laws, G., & Kelly, E. (2005). The attitudes and friendship intentions of children in United Kingdom mainstream schools towards peers with physical or intellectual disabilities. *International Journal of Disability, Development and Education, 52*, 79–99. doi: 10.1080/10349120500086298

Lindsay, G. (2007). Educational psychology and the effectiveness of inclusive education/mainstreaming. *British Journal of Educational Psychology, 77*, 1–24. doi: 10.1348/000709906X156881

Luckner, A. E., & Pianta, R. C. (2011). Teacher–student interactions in fifth grade classrooms: Relations with children's peer behavior. *Journal of Applied Developmental Psychology, 32*, 257–266. doi: 10.1016/j.appdev.2011.02.010

Malti, T., Gasser, L., & Buchmann, M. (2009). Aggressive and prosocial children's emotion attributions and moral reasoning. *Aggressive Behavior, 35*, 90–102. doi: 10.1002/ab.20289

Malti, T., Gasser, L., & Gutzwiller-Helfenfinger, E. (2010). Children's interpretive understanding, moral judgments, and emotion attributions: Relations to social behaviour. *British Journal of Developmental Psychology, 28*, 275–292. doi: 10.1348/026151009X403838

Malti, T., Killen, M., & Gasser, L. (2012). Social judgments and emotion attributions about exclusion in Switzerland. *Child Development, 83*, 697–711. doi: 10.1111/j.1467-8624.2011.01705.x

Mashburn, A. J., Pianta, R. C., Hamre, B. K., Downer, J. T., Barbarin, O. A., Bryant, D., … Howes, C. (2008). Measures of classroom quality in prekindergarten and children's development of academic, language, and social skills. *Child Development,* 79, 732–749. doi: 10.1111/j.1467-8624.2008.01154.x

Merritt, E. G., Wanless, S. B., Rimm-Kaufman, S. E., Cameron, C. E., & Peugh, J. L. (2012). The contribution of teachers' emotional support to children's social behaviors and self-regulatory skills in first grade. *School Psychology Review, 4*1, 141–159.

Mikami, A. Y., Griggs, M. S., Reuland, M. M., & Gregory, A. (2012). Teacher practices as predictors of children's classroom social preference. *Journal of School Psychology, 50*, 95–111. doi: 10.1016/j.jsp.2011.08.002

Mikami, A. Y., Lerner, M. D., & Lun, J. (2010). Social context influences on children's rejection by their peers. *Child Development Perspectives, 4*, 123–130. doi: 10.1111/ j.1750-8606.2010.00130.x

Miller, N., Brewer, M. B., & Edwards, K. (1985). Cooperative interaction in desegregated settings: A laboratory analogue. *Journal of Social Issues, 41*, 63–79. doi: 10.1111/j.1540-4560.1985.tb01129.x

Molina, L. E., & Wittig, M. A. (2006). Relative importance of contact conditions in explaining prejudice reduction in a classroom context: Separate and equal? *Journal of Social Issues, 62*, 489–509. doi: 10.1111/j.1540-4560.2006.00470.x

Moody, J. (2001). Race, school integration, and friendship segregation in America. *American Journal of Sociology, 107*, 679–716. doi: 10.1086/338954

Mulvey, K. L., Hitti, A., & Killen, M. (2010). The development of stereotyping and exclusion. *Wiley Interdisciplinary Reviews: Cognitive Science, 1*, 597–606. doi: 10.1002/wcs.66

Munniksma, A., Stark, T. H., Verkuyten, M., Flache, A., & Veenstra, R. (2013). Extended intergroup friendships within social settings: The moderating role of initial outgroup attitudes. *Group Processes & Intergroup Relations, 16*, 752–770. doi: 10.1177/1368430213486207

Murdock, T. B., Anderman, L. H., & Hodge, S. A. (2000). Middle-grade predictors of students' motivation and behavior in high school. *Journal of Adolescent Research, 15*, 327–351. doi: 10.1177/0743558400153002

Murray, C., Murray, K. M., & Waas, G. A. (2008). Child and teacher reports of teacher–student relationships: Concordance of perspectives and associations with school adjustment in urban kindergarten classrooms. *Journal of Applied Developmental Psychology, 29*, 49–61. doi: 10.1016/j.appdev.2007.10.006

Nakken, H., & Pijl, S. J. (2002). Getting along with classmates in regular schools: A review of the effects of integration on the development of social relationships. *International Journal of Inclusive Education, 6*, 47–61. doi: 10.1080/13603110110051386

Nesdale, D. (2008). Social identity development and children's ethnic attitudes in Australia. In S. M. Quintana & C. Mckown (Eds.), *Handbook of race, racism, and the developing child* (pp. 313–338). Hoboken, NJ: John Wiley & Sons.

Nesdale, D., & Lawson, M. J. (2011). Social groups and children's intergroup attitudes: Can school norms moderate the effects of social group norms? *Child Development, 82*, 1594–1606. doi: 10.1111/j.1467-8624.2011.01637.x

Newcomb, A. F., & Bagwell, C. L. (1995). Children' s friendship relations : A meta-analytic review. *Psychological Bulletin, 117*, 306–347. doi: 10.2307/353560

Ng, M. & Lee, C. K. (1999, April). *The effects of cooperative learning on the cross-ethnic friendship choices of children.* Paper presented at the Annual meeting of the American Educational Research Association, Montreal, Quebec, Canada.

Nguyen, C., & Malti, T. (2014). Children's judgements and emotions about social exclusion based on weight. *British Journal of Developmental Psychology, 32*, 330–344. doi: 10.1111/bjdp.12045

Nipedal, C., Nesdale, D., & Killen, M. (2010). Social group norms, school norms, and children's aggressive intentions. *Aggressive Behavior, 36*, 195–204. doi: 10.1002/ ab.20342

Nucci, L. (2008). *Nice is not enough: Facilitating moral development.* Upper Saddle River, NJ: Pearson.

Nunner‐Winkler, G. (2007). Development of moral motivation from childhood to early adulthood. *Journal of Moral Education, 36*, 399–414. doi: 10.1080/ 03057240701687970

Oelkers, J. (2012). Inklusion als Aufgabe der öffentlichen Schule [Inclusion as a duty of public education]. In S. Seitz, N.-K. Finnern, N. Korff, & K. Scheidt (Eds.), *Inklusiv gleich gerecht? Inklusion und Bildungsgerechtigkeit* [Does inclusive equal just? Inclusion and educational justice] (S. 32–45). Bad Heilbrunn: Klinkhardt.

Ollendick, T. H., Weist, M. D., Borden, M. C., & Greene, R. W. (1992). Sociometric status and academic, behavioral, and psychological adjustment: A five-year longitudinal study. *Journal of Consulting and Clinical Psychology, 60*, 80–87. doi: 10.1037/0022-006X.60.1.80

Oortwijn, M. B., Boekaerts, M., Vedder, P., & Fortuin, J. (2008). The impact of a cooperative learning experience on pupils' popularity, non‐co-operativeness, and interethnic bias in multiethnic elementary schools. *Educational Psychology, 28*, 211–221. doi: 10.1080/01443410701491916

Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology, 29*, 611–621. doi: 10.1037/0012-1649.29.4.611

Parker, J. G., & Gottman, J. (1989). Social and emotional development in a relational context: Friendship interaction from early childhood to adolescence. In T. Berndt & G. Ladd (Eds.), *Peer relationships in child development. Wiley series on personality processes* (pp. 95–131). New York, NY: Wiley.

Peter, F., Dalbert, C., Kloeckner, N., & Radant, M. (2013). Personal belief in a just world, experience of teacher justice, and school distress in different class contexts. *European Journal of Psychology of Education, 28*, 1221–1235. doi: 10.1007/s10212-012-0163-0

Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology, 38*, 922–934. doi: 10.1002/ejsp.504

Phinney, J. S. (2008). Bridging identities and disciplines: Advances and challenges in understanding multiple identities. *New Directions for Child and Adolescent Development, 120*, 97–109. doi: 10.1002/cd.218

Pianta, R. C. (1999). *Enhancing relationships between children and teachers*. Washington, D.C.: American Psychological Association.

Pianta, R. C., & Hamre, B. K. (2009). Conceptualization, measurement, and improvement of classroom processes: Standardized observation can leverage capacity. *Educational Researcher, 38*, 109–119. doi: 10.3102/0013189X09332374

Pianta, R. C., Hamre, B., & Mintz, S. (2012). *Classroom Assessment Scoring System [CLASS] Manual, Upper Elementary* (Vol. 6). Baltimore: Brookes Publishing.

Powell, J. J. W. (2006). Special education and the risk of becoming less educated. *European Societies, 8*, 577–599. doi: 10.1080/14616690601002673

Quillian, L., & Campbell, M. E. (2003). Beyond black and white: The present and future of multiracial friendship segregation. *American Sociological Review, 68*, 540. doi: 10.2307/1519738

Raabe, T., & Beelmann, A. (2011). Development of ethnic, racial, and national prejudice in childhood and adolescence: A multinational meta-analysis of age differences. *Child Development, 82*, 1715–1737. doi: 10.1111/j.1467-8624.2011.01668.x

Rose, C. A., Monda-Amaya, L. E., & Espelage, D. L. (2011). Bullying perpetration and victimization in special education: A review of the literature. *Remedial and Special Education, 32*, 114–130. doi: 10.1177/0741932510361247

Roseth, C. J., Johnson, D. W., & Johnson, R. T. (2008). Promoting early adolescents' achievement and peer relationships: The effects of cooperative, competitive, and individualistic goal structures. *Psychological Bulletin, 13*4, 223–246. doi: 10.1037/0033-2909.134.2.223

Rubin, K. H., Bukowski, W. M., & Parker, J. G. (2006). Peer interactions, relationships, and groups. In N. Eisenberg, W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development, 6th ed.* (pp. 571–645). New York, NY: Wiley & Sons Inc.

Ruck, M. D., Park, H., Crystal, D. S., & Killen, M. (2015). Intergroup contact is related to evaluations of interracial peer exclusion in African American students. *Journal of Youth and Adolescence, 44*, 1226–1240. doi: 10.1007/s10964-014-0227-3

Ruck, M. D., Park, H., Killen, M., & Crystal, D. S. (2011). Intergroup contact and evaluations of race-based exclusion in urban minority children and adolescents. *Journal of Youth and Adolescence, 40*, 633–643.doi: 10.1007/s10964-010-9600-z

Rutland, A., & Killen, M. (2015). A developmental science approach to reducing prejudice and social exclusion: Intergroup processes, social-cognitive development, and moral reasoning. *Social Issues and Policy Review, 9*, 121–154. doi: 10.1111/sipr.12012

Rutland, A., Killen, M., & Abrams, D. (2010). A new social-cognitive developmental perspective on prejudice: The interplay between morality and group identity. *Perspectives on Psychological Science, 5*, 279–291. doi: 10.1177/1745691610369468

Selig, J. P., & Preacher, K. J. (2009). Mediation models for longitudinal data in developmental research. *Research in Human Development, 6*, 144–164. doi: 10.1080/15427600902911247

Selman, R. L. (1980). *The growth of interpersonal understanding: Developmental and clinical analyses.* New York, NY: Academic Press.

Smetana, J. G. (2006). Social-cognitive domain theory: Consistencies and variations in children's moral and social judgments. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development* (pp. 119–154). Mahwah, NJ: Erlbaum Associates.

Spears Brown, C., & Bigler, R. S. (2005). Children's perceptions of discrimination: A developmental model. *Child Development, 76*, 533–553. doi: 10.1111/j.1467-8624.2005.00862.x

Stormshak, E. a, Bierman, K. L., Bruschi, C., Dodge, K. A., & Coie, J. D. (1999). The relation between behavior problems and peer preference in different classroom contexts. *Child Development, 70*, 169–182. doi: 10.1111/1467-8624.00013

Suldo, S. M., Friedrich, A. A., White, T., Farmer, J., Minch, D., & Michalowski, J. (2009). Teacher support and adolescents' subjective well-being: A mixed-methods investigation. *School Psychology Review, 38*, 67–85.

Swart, H., Hewstone, M., Turner, R. N., & Voci, A. (2011). Achieving forgiveness and trust in postconflict societies: The importance of self-disclosure and empathy. In L. R. Tropp & R. Mallett (Eds.), *Beyond prejudice reduction: Pathways to positive intergroup relations* (pp. 181–200). Washington, D.C.: American Psychological Association.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks-Cole.

Teichman, Y., Bar-Tal, D., & Abdolrazeq, Y. (2007). Intergroup biases in conflict: Reexamination with Arab pre-adolescents and adolescents. *International Journal of Behavioral Development, 31*, 423–432. doi: 10.1177/0165025407081470

Thijs, J., & Verkuyten, M. (2014). School ethnic diversity and students' interethnic relations. *British Journal of Educational Psychology, 84*, 1–21. doi: 10.1111/bjep.12032

Tichy, M., Johnson, D. W., Johnson, R. T., & Roseth, C. J. (2010). The impact of constructive controversy on moral development. *Journal of Applied Social Psychology, 40*, 765–787. doi: 10.1111/j.1559-1816.2010.00597.x

Tropp, L. R., & Prenovost, M. A. (2008). The role of intergroup contact in predicting children's interethnic attitudes: Evidence from meta-analytic and field studies. In S. R. Levy & M. Killen (Eds.), *Intergroup attitudes and relations in childhood through adulthood* (pp. 236–248). New York, NY: Oxford University Press.

Turiel, E. (1983). *The development of social knowledge: Morality and convention.* Cambridge, UK: Cambridge University Press.

Turiel, E., & Killen, M. (2010). Taking emotions seriously: The role of emotions in moral development. In W. Arsenio & E. Lemerise (Eds.), *Emotions, aggression, and morality in children: Bridging development and psychopathology* (pp. 33–52). Washington, D.C.: APA.

Turner, J. C. (1982). Towards a Cognitive Redefinition of the Social Group. In H. Tajfel (Ed.), *Social Identity and Intergroup Relations* (pp. 15–40). Cambridge, UK: Cambridge University Press.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, S. M. (1987). *Rediscovering the social group: A self-categorization theory.* Oxford, UK: Blackwell.

Turner, R. N., Hewstone, M., & Voci, A. (2007). Reducing explicit and implicit outgroup prejudice via direct and extended contact: The mediating role of self-disclosure and intergroup anxiety. *Journal of Personality and Social Psychology, 93*, 369–388. doi: 10.1037/0022-3514.93.3.369

United Nations (2006). *Convention on the rights of persons with disabilities.* Retrieved from http://www.un.org/disabilities/

United Nations Human Rights Office of the High Commissioner (2016). *Ratification of the convention on the rights of persons with disabilities.* Retrieved from http://www.ohchr.org/EN/HRBodies/CRPD/Pages/CRPDIndex.aspx

Vermeij, L., van Duijn, M. A. J., & Baerveldt, C. (2009). Ethnic segregation in context: Social discrimination among native Dutch pupils and their ethnic minority classmates. *Social Networks, 31*, 230–239. doi: 10.1016/j.socnet.2009.06.002

Vervoort, M. H. M., Scholte, R. H. J., & Overbeek, G. (2010). Bullying and victimization among adolescents: The role of ethnicity and ethnic composition of school class. *Journal of Youth and Adolescence, 39*, 1–11. doi: 10.1007/s10964-008-9355-y

Vezzali, L., Giovannini, D., & Capozza, D. (2012). Social antecedents of children's implicit prejudice: Direct contact, extended contact, explicit and implicit teachers' prejudice. *European Journal of Developmental Psychology, 9*, 569–581. doi: 10.1080/17405629.2011.631298

Vieno, A., Perkins, D. D., Smith, T. M., & Santinello, M. (2005). Democratic school climate and sense of community in school: A multilevel analysis. *American Journal of Community Psychology, 36*, 327–341. doi: 10.1007/s10464-005-8629-8

Wentzel, K. R. (1998). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of Educational Psychology, 90*, 202–209. doi: 10.1037/0022-0663.90.2.202

Wentzel, K. R., Battle, A., Russell, S. L., & Looney, L. B. (2010). Social supports from teachers and peers as predictors of academic and social motivation. *Contemporary Educational Psychology, 35*, 193–202. doi: 10.1016/j.cedpsych.2010.03.002

Wright, J. C., Giammarino, M., & Parad, H. W. (1986). Social status in small groups: Individual group similarity and the social "misfit." *Journal of Personality and Social Psychology, 50*, 523–536. doi: 10.1037/0022-3514.50.3.523

6 Chapter 1: Social Exclusion of Children with Special Educational Needs: A Question of Viewpoint?

The reference to the published version is:

Grütter, J., Meyer, B., & Glenz, A. (2015). Sozialer Ausschluss von Kindern mit besonderen Bedürfnissen: Ansichtssache? [Social exclusion of children with special educational needs: A question of viewpoint?] *Psychologie in Erziehung und Unterricht, 62*, 65-82. doi: 10.2378/peu2015.art05d

Sozialer Ausschluss in Integrationsklassen: Ansichtssache?
Social exclusion in inclusive classrooms: A question of viewpoint?

Jeanine Grütter[1]

Bertolt Meyer[2]

Andreas Glenz[3]

[1]Pädagogische Hochschule Luzern

[2]Technische Universität Chemnitz

[3]Universität Zürich

Autorenanschrift: Jeanine Grütter, Institut für Schule und Heterogenität, Pädagogische Hochschule, Töpferstrasse 10, CH-6004 Luzern, Schweiz. Kontakt: jeanine.gruetter@phlu.ch, Tel.: +41(0)412284524

Zusammenfassung

Diese Studie vergleicht verschiedene soziometrische Masse, welche die soziale Inklusion von Kindern mit sonderpädagogischem Förderbedarf (SFB) erfassen. Wir nehmen an, dass die soziale Teilhabe auch davon abhängt, wie sie gemessen wurde. Zudem testen wir, ob mit zunehmender Heterogenität der Klasse eine höhere Akzeptanz der Kinder einhergeht. Die Annahmen wurden mit sozialen Netzwerkdaten von 439 Lernenden in integrativen Klassenzimmern, die mit strukturierten Interviews gewonnen wurden, getestet. Die Resultate zeigen, dass die soziale Inklusion von Kindern mit SFB davon abhängt, welches soziometrische Mass verwendet wird. Zudem fällt die soziale Inklusion aller Lernenden mit zunehmender Heterogenität der Klasse höher aus. Wir diskutieren die Notwendigkeit einer ganzheitlichen Messung der sozialen Beziehungen eines Kindes sowie kontextueller Aspekte bei der Erfassung von sozialem Ausschluss. Wir schlussfolgern, dass nicht das Kind im Fokus stehen sollte, das nicht in die Klasse passt, sondern das Ausmass, mit dem das schulische Umfeld auf die Bedürfnisse des jeweiligen Kindes eingehen kann.

Keywords: Sozialer Ausschluss, Inklusion, besondere Bedürfnisse, Soziometrie

Summary

The present study compares different measures of social inclusion of children with special educational needs (SEN). We review common measures for social inclusion and hypothesize that the type of measure of social inclusion has a significant impact on the relationship between SEN and social inclusion. Further, we assume that more diverse classrooms are related to higher social acceptance. We elicited social networks of 439 primary school children in integrative classrooms with structured interviews. Results showed that differences in social inclusion between children with low, moderate and high SEN and students without SEN depended on the type of measure. We conclude that the measurement of social inclusion should capture a holistic view of a child's social relationships. In addition, contextual conditions of the classroom should be considered such that the focus of the evaluation is not whether a child fits into a classroom, but whether the classroom is accommodating the child.

Keywords: Social exclusion, inclusion, special educational needs, sociometry

6.1 Einleitung

In den letzten zwanzig Jahren wurden vermehrt Anläufe unternommen, um Lernende mit sonderpädagogischem Förderbedarf (SFB) in Regelschulen zu integrieren und damit einen Schritt in Richtung Chancengerechtigkeit zu gehen. Das Ziel dieser integrativen Ansätze besteht in einer Reduktion von sozialem Ausschluss derjenigen Kinder, die bis anhin in separativen schulischen Einrichtungen unterrichtet wurden. Die Unterschiede zwischen den Lernenden bieten gleichzeitig eine Chance auf tolerante Einstellungen und Verhaltensweisen (Boban & Hinz, 2003). Durch den Kontakt mit unterschiedlichen Kindern sollen dabei diskriminierende Haltungen abgebaut und die Grundlagen für eine inklusive Gesellschaft geschaffen werden (UNESCO, 1994). Die tägliche Konfrontation mit Andersartigkeit birgt jedoch auch ein Risiko für sozialen Ausschluss in sich. Neben individuellen Faktoren wie dem Gewicht, der Kleidung oder anderen Äusserlichkeiten können Vorurteile gegenüber sozialen Gruppen wie zum Beispiel gegenüber Kindern anderer Herkunft oder Kindern mit SFB zu sozialem Ausschluss führen (Killen & Rutland, 2011; Malti, Killen, & Gasser, 2012). Darunter wird die soziale Zurückweisung aus Peer-Aktivitäten verstanden, die sich sowohl im schulischen wie auch im privaten Alltag zeigen kann (Killen & Rutland, 2011).

Zahlreiche Studien weisen darauf hin, dass Kinder mit SFB im Vergleich zu ihren Mitschülern und -Schülerinnen stärker von sozialem Ausschluss betroffen sind (z. B. Cambra & Silvestre, 2003; De Monchy, Pijl, & Zandberg, 2004; Frostad & Pijl, 2007; für Meta-Analysen siehe Bless, 2000; Kavale & Forness, 1996; Nowicky, 2003). Studien zur sozialen Inklusion untersuchten mittels soziometrischer Methoden, wie gut Kinder mit besonderem SFB in Regelschulklassen in das soziale Gefüge der Klasse integriert sind [2]. Da sozialer Ausschluss ein hohes Risiko für schlechtere Schulleistungen, Schulabbruch und Delinquenz mit sich bringt (Buhs, Ladd, & Herald, 2006) und mit gesundheitlichen Konsequenzen wie Depression und Angst einhergeht (Biermann, 2004), zeichnet sich eine pessimistische Perspektive hinsichtlich der schulischen Inklusion von Lernenden mit SFB ab.

Die aktuelle Forschungslage ist jedoch widersprüchlich, da auch Resultate berichtet wurden, die zeigen, dass Kinder mit SFB in der Regel sozial gleich gut integriert sind wie ihre Mitschüler ohne SFB (z. B. Juvonen & Baer, 1992; Nakken & Pijl, 2002). Zudem war auch die Varianz der Effektstärken in den Metaanalysen nicht homogen, was auf starke Unterschiede zwischen den Studien hinweist (Kavale & Forness, 1996; Nowicky, 2003). Wir

[2] Diese Studie bezieht sich auf den Vergleich von Kindern mit und ohne SFB in inklusiven Klassen. Vergleiche von Kindern mit SFB in inklusiven und separativen Einrichtungen können aus Platzgründen nicht angesprochen werden. Eine Übersicht bezüglich problematischer Aspekte dieses Studiendesigns geben Nakken und Pijl (2002).

vermuten, dass verschiedene Faktoren zu dieser heterogenen Befundlage beitragen: Die Zielgruppen, die miteinander verglichen wurden, die verschiedenen soziometrischen Masse, welche verwendet wurden, sowie die kontextuellen Bedingungen, die bei den Studien berücksichtigt wurden. Das Ziel dieses Artikels ist es, die Einflüsse dieser Faktoren anhand einer empirischen Untersuchung systematisch voneinander zu unterscheiden.

Wir nehmen an, dass die unterschiedliche Operationalisierung und Messung von sozialem Ausschluss mittels Soziometrie einen Teil zu der heterogenen Forschungslage beiträgt. Wir testen, ob die verschiedenen Masse von sozialem Ausschluss zu unterschiedlichen Resultaten bezüglich der sozialen Inklusion von Kindern mit SFB führen können. Zudem berücksichtigen wir die Art des sonderpädagogischen Förderbedarfs der Kinder und fokussieren auf die Zusammensetzung der Klasse als kontextuellen Einflussfaktor.

Erkenntnisse aus dieser Studie können dazu dienen, den Blick für methodische und inhaltliche Aspekte zu schärfen, wenn über das Thema sozialer Ausschluss diskutiert wird. Des Weiteren lässt sich durch den Vergleich der unterschiedlichen Konzepte und Methoden zur Messung von sozialer Inklusion ein umfassendes Bild darüber gewinnen, wie die sozialen Kontakte von Kindern mit besonderem Bildungsbedarf optimiert werden könnten.

6.1.1 Die soziale Inklusion von Kindern mit besonderen Bedürfnissen

Verschiedene Reviews der Literatur zur sozialen Inklusion von Kindern mit SFB verweisen auf mehrere problematische Aspekte, wenn Studien zur sozialen Inklusion miteinander verglichen werden. Eine dieser Schwierigkeiten besteht in der unterschiedlichen Konzeption des Begriffes sonderpädagogischer Förderbedarf (Lindsay, 2007; Nakken & Pijl, 2002; Ruijs & Peetsma, 2009). Dieser Begriff bezieht sich auf eine breite Palette von Kindern mit sozio-emotionalen, physischen, sprachlichen und intellektuellen Schwierigkeiten (Powell, 2006). Nicht weniger breit ist auch die Palette an Studien, welche die soziale Inklusion von Kindern mit SFB untersuchten, da sich die Klassifikationssysteme betreffend sonderpädagogischem Förderbedarf sowie der Art der inklusiven Sonderschulung international teilweise wesentlich unterscheiden (Lindsay, 2007; Powell, 2006; Ruijs & Peetsma, 2009). Einige Studien bedienten sich dabei der breiten Definition von SFB und berücksichtigten im Sinne einer inklusiven Vorgehensweise alle Kinder, die zusätzliche Förderung in Regelschulklassen erhielten (z. B. Cambra & Silvestre, 2003; Frostad & Pijl, 2007). Andere Studien fokussierten auf Kinder mit spezifischen Bedürfnissen wie beispielsweise Kinder mit geistiger Behinderung (z. B. Scheepstra, Nakken, & Pijl, 1999), Kinder mit Auffälligkeiten im Sozialverhalten (z. B. De Monchy et al., 2004) oder Kinder mit

Lernbehinderungen (z. B. Bakker, Denessen, Bosman, Krijger, & Bouts, 2007; Estell et al., 2008; Huber & Wilbert, 2012). Die Resultate aus den verschiedenen Studien weisen darauf hin, dass sich die Art des SFB auf die soziale Inklusion eines Kindes auswirken kann. Geistige oder psychische Beeinträchtigungen werden dabei ungünstiger bewertet als physische oder sensorische Handicaps, und Personen mit eindeutig abweichenden Eigenschaften werden insgesamt ungünstiger beurteilt (Cambra & Silvestre, 2003; Cloerkes, 2001; De Monchy et al., 2004). Zudem weisen vor allem Kinder mit Verhaltensproblemen einen niedrigen sozialen Status in der Klasse auf (De Monchy et al., 2004). In einigen Studien wurden Kinder mit leichter, mittlerer und hoher Intensität der benötigten sonderpädagogischen Förderung miteinander verglichen (Bakker et al., 2007; Huber & Wilbert, 2012; Vaughn, Elbaum, & Schumm, 1996). Die Ergebnisse dieser Studien zeigen, dass die soziale Inklusion mit zunehmender Intensität dieser Förderung abnimmt (Bakker et al., 2007; Huber & Wilbert, 2012). Vaughn et al. (1996) fanden jedoch heraus, dass Kinder mit leichtem und hohem SFB weniger beliebt waren als ihre Klassenkameraden und -Kameradinnen, wobei sich der soziale Status von Kindern mit leichter und hoher Intensität an sonderpädagogischer Förderung nicht signifikant voneinander unterschied. Es zeichnet sich also auch hier keine konsistente Befundlage ab. Einer der Gründe dafür könnte die Verwendung verschiedener Konzeptualisierungen von sozialer Inklusion und der damit verbundenen, unterschiedlichen Messung von sozialem Ausschluss mittels Soziometrie sein.

6.1.2 Was soziometrische Angaben zeigen

Sozialer Ausschluss spiegelt die Beziehung zwischen einem Individuum und seiner Umwelt wieder (Jansen, 2006). Deshalb wird die soziale Inklusion eines Kindes in der Regel mit soziometrischen Massen auf der Basis sozialer Netzwerkanalysen quantifiziert. Mit diesen Massen können sowohl Aussagen über einzelne Mitglieder und den Beziehungen zwischen ihnen als auch über Charakteristiken der Gruppe gemacht werden.

Die Art und Weise, wie soziale Netzwerke erhoben werden, variiert stark. Meistens werden Kinder nach ihren besten Freunden gefragt oder sie werden gebeten, alle Kinder aufzuzählen, die sie am meisten oder am wenigsten mögen. Aus den so gewonnen Wahlen werden die soziometrischen Masse gebildet, welche die soziale Inklusion der Kinder messen. Um die soziale Inklusion der Lernenden zu beurteilen, können dabei verschiedene Arten von Informationen berücksichtigt werden. Die Abbildung 1 stellt die Wahlen einer Gruppe von sieben Kindern dar, die zu ihren sozialen Beziehungen befragt wurden und dient der Illustration, wie sich die verschiedenen soziometrischen Masse zusammensetzen. Die in der Forschung häufig verwendeten Masse unterscheiden sich darin, ob sie einseitige (Kind B

wählt Kind G, einseitiger Pfeil vgl. Abb. 1) oder beidseitige Wahlen (z.B. Kind A und Kind D, beidseitiger Pfeil, vgl. Abb. 1) enthalten und ob sie nur die direkten (z.B. zw. Kind A und Kind D, vgl. Abb. 1) oder auch die indirekten Beziehungen eines Kindes (z.B. zw. Kind A und Kind C, vgl. Abb. 1) berücksichtigen.

Welche dieser Informationen in die Berechnung des sozialen Netzwerkmasses einfliessen, ist von der Konzeptualisierung und Operationalisierung von sozialer Inklusion abhängig. Ein Grossteil der Studien zur sozialen Inklusion von Kindern mit SFB bezieht sich dabei auf die Erfassung der sozialen Stellung eines Kindes in der Klasse mittels der Anzahl Wahlen, die ein Kind erhält (Juvonen & Baer, 1992). Diese eingehenden Wahlen werden in der sozialen Netzwerkanalyse als Indegree bezeichnet. Da Klassen unterschiedlich gross sind und sich in der Anzahl möglicher Wahlen unterscheiden, wird dieses Mass an der Klassengrösse bzw. der Anzahl möglichen Wahlen pro Klasse standardisiert (Jansen, 2006; Pijl & Frostad, 2010). Der Indegree eines Kindes operationalisiert dessen Beliebtheit (Jansen, 2006). Ein gängiges Verfahren ist dabei, den Integrationsstatus eines Kindes anhand der erhaltenen Wahlen für Beliebtheit („Welche Kinder in der Klasse magst du am meisten?“) abzüglich der Wahlen für Zurückweisung („Welche Kinder in der Klasse magst du am wenigsten?“) zu berechnen (Moreno, 1974). Sowohl der Wert für Beliebtheit als auch der Wert für Zurückweisung werden danach anhand der Varianz der Anzahl Wahlen und der mittleren Anzahl Wahlen pro Klasse standardisiert (Moreno, 1974). Der so gewonnene Wert eines Kindes lässt sich mit dem mittleren Wert der Klasse vergleichen. Dadurch wird das Kind in eine von fünf Kategorien eingeteilt, die seine soziale Stellung in der Klasse anzeigen: beliebt, durchschnittlich, kotroversiell, vernachlässigt oder abgelehnt (Coie & Dodge, 1988).
Studien, welche die soziale Inklusion von Kindern mit SFB anhand der erhaltenen Wahlen messen, ergeben ein konsistentes Resultat, unabhängig davon, wie das Mass standardisiert wurde (siehe Tabelle 1): Kinder mit SFB sind signifikant weniger beliebt als Lernende ohne SFB (Bakker et al., 2007; Cambra & Silvestre, 2003; Estell et al., 2008; Huber & Wilbert, 2012; Juvonen & Baer, 1992; Pijl & Frostad, 2010; Vaughn et al., 1996; Yude, Godman, & McConachie, 1998).

Ein Blick auf die Definition der sozialen Inklusion der OECD (1995) zeigt jedoch, dass die Beliebtheit eines Kindes nicht mit dessen sozialer Inklusion gleichgesetzt werden kann. Inklusion ist dort als Prozess definiert, der die sozialen Interaktionen zwischen Kindern mit und ohne SFB maximiert. Inklusion bedingt demnach die aktive Teilnahme der Kinder mit SFB. Nach Cullinan, Sabornie und Crossland (1992) ist ein Kind neben dem Aspekt der sozialen Akzeptanz erst dann integriert, wenn es über mindestens eine Freundschaft verfügt

und aktiv und äquivalent wie die anderen Lernenden an Gruppenaktivitäten teilnimmt. Der einseitige Fokus auf die Beliebtheit eines Kindes ergibt daher ein unvollständiges Bild der sozialen Inklusion (Pearl et al., 1998). Um den in beiden Definitionen genannten Aspekt der Gegenseitigkeit zu berücksichtigen, müssen in den sozialen Netzwerken folglich gegenseitige Wahlen der Kinder beachtet werden. Nur wenn sich zwei Kinder gegenseitig nennen, kann von einer Freundschaft gesprochen werden (Frostad & Pijl, 2007; Juvonen & Baer, 1992; Yude et al., 1998). Studien, die neben der Beliebtheit eines Kindes auch die Anzahl Freundschaften erfasst haben, zeigten, dass auch wenig beliebte Kinder mit SFB reziproke Freundschaften haben (Juvonen & Baer, 1992; Vaughn et al., 1996). Zudem können auch sehr beliebte Kinder sozial isoliert sein (Parker & Asher, 1997). Da Freundschaften mit sozialer Unterstützung einhergehen und positiv mit der sozialen Entwicklung eines Kindes assoziiert sind (Parker & Asher, 1997), sind sie ein stärkerer Prädiktor für die soziale Inklusion von Kindern mit SFB als Beliebtheit (Juvonen & Baer, 1992). Einige Studien, welche die Anzahl Freundschaften gemessen haben, weisen jedoch darauf hin, dass Kinder mit SFB signifikant weniger Freundschaften haben als ihre Mitschüler (Frostad & Pijl, 2007; Yude et al., 1998), wobei dieser Befund in einer Langzeitstudie über zwei Jahre stabil blieb (Estell et al., 2008). In dieser Langzeitstudie wurden Freundschaften jedoch nur über einseitige Peernominationen gemessen. Im Gegensatz dazu fanden Vaughn et al. (1996), welche Freundschaften als gegenseitige Beziehungen operationalisierten heraus, dass die Anzahl Freundschaften von Kindern mit hohem SFB während eines Jahres stark zunahm und am Ende des Schuljahres im Vergleich zu Lernenden ohne SFB kein signifikanter Unterschied mehr bestand. Die Befundlage zum Aspekt der Freundschaften ergibt hier also ein weniger negatives, wenn auch nicht konsistentes Bild (siehe Tabelle 1).

Nebst der Existenz von Freundschaften ist auch die aktive Teilnahme an Gruppenaktivitäten ein Kriterium für die soziale Inklusion eines Kindes (Cullinan et al., 1992; Farell, 2000). Um ein möglichst vollständiges Bild der sozialen Inklusion von Kindern mit SFB zu gewinnen, wurde folglich deren soziale Eingebundenheit in Schülercliquen gemessen (Estell et al., 2008; Frostad & Pijl, 2007). Um Cliquen zu identifizieren, gibt es verschiedene Verfahren, wobei neben den direkten auch die indirekten Beziehungen sowie die Häufigkeit dieser Beziehungen näher betrachtet werden. Da die meisten sozialen Interaktionen von Kindern in deren Cliquen oder Peergruppen stattfinden, gibt die Cliquenzugehörigkeit darüber Aufschluss, ob ein Kind aktiv an Gruppenaktivitäten in der Klasse teilnimmt (Frostad & Pijl, 2007; Pearl et al., 1998). Studien, welche die soziale Inklusion von Kindern mit besonderen Bedürfnissen anhand der Cliquenzugehörigkeit erfassten, ergaben verschiedene Resultate

(Estell et al., 2008; Frostad & Pijl, 2007). Dabei bestehen jedoch Unterschiede in der methodischen Erfassung von Cliquen. Einerseits existieren Studien, welche die Kinder fragen, welche Personen aus ihrer Klasse „zusammen rumhängen“. Dabei werden jedoch keine gegenseitigen Nennungen erfasst, sondern die verschiedenen Angaben der Kinder überlagert, um mithilfe sogenannter sozial-kognitive Landkarten zu generieren, wie sich die Cliquen in der Klasse zusammensetzen (Pearl et al., 1998). In der Langzeitstudie von Estell et al. (2008), bei welcher Cliquen auf diese Weise gemessen wurden, waren Kinder mit SFB mit gleicher Häufigkeit in Cliquen integriert und nahmen darin gleich zentrale Positionen ein wie Kinder ohne SFB. Andererseits können Cliquen auch aus den Freundschaftsnominationen der Kinder gewonnen werden, wobei nur gegenseitige Nennungen in die Clique einfliessen. Dabei müssen alle Mitglieder mindestens indirekt über maximal zwei Personen erreichbar sein. In Abbildung 1 kann beispielsweise das Kind A, das Kind E indirekt und gegenseitig (Doppelpfeile) über Kind D erreichen. Die Kinder A, B, C, D, E und G bilden hierbei eine Clique. Kind F gehört nicht dazu, weil es nicht alle anderen Kinder indirekt gegenseitig erreichen kann. Resultate aus einer Studie analog zu diesem Verfahren ergeben, dass Kinder mit SFB signifikant weniger häufig in Cliquen integriert waren als ihre Klassenkameraden (Frostad & Pijl, 2007). Da zu diesem Zeitpunkt keine weiteren Studien bekannt sind, die aufgrund gegenseitiger Beziehungen Cliquen ermittelt haben, kann aktuell wenig über die soziale Eingebundenheit von Lernenden mit SFB in Schülercliquen ausgesagt werden.

In dieser Studie untersuchen wir daher, wie sich die soziale Inklusion von Kindern mit und ohne SFB in Abhängigkeit des verwendeten sozialen Netzwerkmasses unterscheidet. Da sich innerhalb der Studien, welche das gleiche Mass verwendet haben und Kinder mit ähnlichem SFB verglichen, unterschiedliche Resultate ergeben (siehe Tabelle 1), nehmen wir ferner an, dass auch der schulische Kontext, in dem sich die Kinder befinden, auf die soziale Teilhabe auswirkt.

6.1.3 Kontextuelle Bedingungen

Die Forschungslage zu den Einflüssen des sozialen Umfeldes auf die Inklusion ist dünn (Mikami, Lerner, & Lun, 2010), obwohl eine grosse Varianz in der sozialen Inklusion von Kindern mit SFB besteht (Chang, 2004; Kavale & Forness, 1996; Nowicky, 2003). Verschiedene Autoren verweisen darauf, dass das Lernumfeld einbezogen werden muss, wenn soziale Beziehungen zwischen den Kindern in der Klasse untersucht werden (Farrell, 2000; Frostad & Pijl, 2007; Huber & Wilbert, 2012; Lindsay, 2007). Ein Aspekt, der sich auf die soziale Teilhabe der Kinder auswirken kann, ist die Zusammensetzung der Klasse. Kinder mit aggressiven und hyperaktiven Verhaltensweisen sind beispielsweise in solchen

Schulklassen beliebter, in denen diese Verhaltensweisen häufiger vorkommen (Chang, 2004). Der soziale Kontext verändert folglich die Bedeutung eines Verhaltens (Chang, 2004; Mikami et al., 2010). Diese Resultate gehen mit der Idee einer integrativen Pädagogik einher, bei der sich das Risiko für soziale Ausgrenzung von Kindern mit SFB mit zunehmender Heterogenität der Lernenden verringert (Feuser, 1995; Huber, 2009). Resultate aus einer deutschsprachigen Studie ergaben jedoch keinen Zusammenhang zwischen der Lerngruppenheterogenität und der Beliebtheit von Kindern mit SFB (Huber, 2009). In dieser Studie wurde die Heterogenität der Schulklasse aus der Varianz von zehn verschiedenen Schülereigenschaften berechnet. Im Unterschied dazu untersuchen Studien zum Einfluss der ethnischen Zusammensetzung der Klasse die Heterogenität in der Klasse anhand des Simpson Index (Simpson, 1949). Dabei fliessen die Anzahl der verschiedenen ethnischen Gruppen und deren relativer Anteil in der Klasse ein. Studien zeigen beispielsweise, dass sich Kinder in ethnisch heterogenen Klassen sicherer fühlten und weniger von Mitschülern schikaniert wurden als in ethnisch homogeneren Schulen (Juvonen, Nishina, & Graham, 2006). In der Forschung zur sozialen Inklusion von Kindern mit SFB wurde der Simpson Index bisher noch nicht eingesetzt.

Um den Einfluss der Klassenzusammensetzung auf die soziale Teilhabe von Kindern mit SFB zu klären, untersuchen wir anhand des Simpson Index für Diversität, ob mit zunehmender Heterogenität der Schulklasse weniger sozialer Ausschluss stattfindet.

6.1.4 Die vorliegende Studie

Aufgrund der obigen Überlegungen nehmen wir an, dass die unterschiedlichen Resultate zur Inklusion von Kindern mit SFB in den bisherigen Studien durch den Fokus auf unterschiedliche Zielgruppen sowie die Verwendung verschiedener Masse zustande kamen. Zudem gehen wir davon aus, dass auch die Zusammensetzung der Klasse einen Einfluss auf die soziale Inklusion aller Kinder in der Klasse hat.

Um ein ganzheitliches Bild der sozialen Inklusion von Kindern mit SFB zu gewinnen, untersuchen wir, wie die Art des verwendeten soziometrischen Masses mit der sozialen Teilhabe von Kindern mit leichtem, mittlerem und hohem SFB zusammenhängt. Anders ausgedrückt vermuten wir, dass die Art des verwendeten soziometrischen Masses den Zusammenhang zwischen der Art des Förderbedarfs eines Kindes und dessen sozialer Inklusion beeinflusst (Hypothese 1). Wir nehmen an, dass Kinder mit SFB sozial gleich gut integriert sind wie Kinder ohne SFB, wenn gegenseitige Beziehungen wie Freundschaften oder die soziale Eingebundenheit in Cliquen berücksichtigt werden (Hypothese 2). Des Weiteren postulieren wir, dass mit zunehmender Heterogenität der Klasse eine höhere

Akzeptanz aller Kinder in der Klasse einhergeht (Hypothese 3). Diese Hypothesen wurden in einer Feldstudie mit zwanzig Primarschulklassen getestet.

6.2 Methodik

6.2.1 Stichprobe

Die Stichprobe umfasste 439 Kinder (208 Mädchen) aus 20 Schulklassen aus fünf verschiedenen Schulgemeinden der ersten bis sechsten Klassenstufe des Kantons Zürich[3]. Alle fünf Gemeinden waren zum Zeitpunkt der Erhebung bezüglich Sozialindex, Altersindex, Berufsmittelschulquote, Anzahl Lernender auf allen Schulstufen, Alter der Lehrpersonen und durchschnittlicher Klassengrösse vergleichbar. Die Rekrutierung der Studienteilnehmer fand über das Zürcher Volksschulamt statt. Die Teilnahme an der Studie war freiwillig. Lehrpersonen, die sich für eine Teilnahme entschieden, wurden persönlich über die Studie aufgeklärt. Die Eltern erhielten ein Schreiben und gaben ihr Einverständnis für die Studienteilnahme ihres Kindes, wobei 2.5% der Eltern keine Teilnahme wünschten. Schliesslich wurden 428 Kinder interviewt. Das Alter der Schüler variierte zwischen sechs und vierzehn Jahren, wobei das durchschnittliche Alter zehn Jahre betrug (M = 10.1, SD = 1.44). Neunundzwanzig Prozent der Kinder hatten einen Migrationshintergrund und 15.7% (n = 67) der Kinder erhielten integrative Förderung durch eine heilpädagogische Fachkraft.

6.2.2 Vorgehen

Die Datenerhebung fand zwischen Januar und April 2010 statt. Die Kinder wurden an einem ruhigen Platz ausserhalb des Klassenzimmers persönlich zu ihren Sozialkontakten interviewt, damit sie bei Unklarheiten jederzeit nachfragen konnten. Das Interview dauerte 10 Minuten und es wurden Piktogramme verwendet, um für ein besseres Verständnis zu sorgen.

6.2.3 Instrumente

Sonderpädagogischer Förderbedarf. Der SFB wurde durch den Erhalt von sonderpädagogischer Förderung operationalisiert, da wir es vermeiden wollten, Lernende durch die Befragung auf mögliche Handicaps ihrer Klassenkameraden und -Kameradinnen aufmerksam zu machen. Die Lehrpersonen gaben dabei an, ob Kinder integrative Förderung oder integrative Sonderschulung erhielten. In der Schweiz lag die Verantwortung für integrative Sonderschulung zum Zeitpunkt der Erhebung in der Verantwortung der

[3] Ein Teil dieses Datensatzes wurde bereits veröffentlicht (maskiert für Begutachtung). Jedoch wurden dabei keine der hier berichteten Variablen verwendet. Die Korrelationsmatrix der Variablen ist zudem unabhängig.

Sonderschule. Diese Kinder erhalten sowohl eine qualitativ als auch quantitativ höhere sonderpädagogische Unterstützung als Kinder mit integrativer Förderung. Für Letztere trägt die Regelschule die Verantwortung. Für Kinder mit integrativer Förderung gaben die Lehrpersonen an, in welchen Kernfächern die Lernenden zusätzliche Unterstützung benötigten und ob diese Kinder reduzierte Lernziele hatten. Anhand dieser Angaben wurde eine Variable gebildet, welche die Intensität der erhaltenen Förderung der Kinder zeigt (0 = kein SFB, 1 = leichter SFB: zusätzliche Unterstützung in einem Kernfach, 2 = mittlerer SFB: zusätzliche Unterstützung in mehr als einem Kernfach, 3 = hoher SFB: integrative Sonderschulung). Die Trennung zwischen leichtem und mittlerem SFB wurde dabei so gebildet, dass Kinder mit Teilleistungsschwächen in einem Bereich als leicht, und Kinder mit einem umfassenderen SFB als mittel eingestuft wurden (Bakker et al., 2007). Dabei wurden zusätzlich Kinder mit Schwierigkeiten im Bereich der Sprache (z.B. Lese-Rechtschreibstörung) durch Angaben der Lehrpersonen identifiziert und als leicht klassifiziert, wenn kein zusätzlicher SFB bestand.

Soziale Beziehungen zwischen Kindern mit und ohne integrativer Förderung. Da die sozialen Beziehungen der Kinder einer Klasse gemessen werden sollten, wurde jeweils das gesamte soziale Netzwerk der Klasse erhoben. Die Abgrenzung stellte hierbei die Klassenzugehörigkeit dar. Den Kindern wurden Fragen zu spezifischen Aspekten von Freundschaften gestellt. Weil negative Wahlen kritisch für den Selbstwert der Kinder sein können, wurde darauf bewusst verzichtet. Zudem werden Kinder insgesamt hinsichtlich ihrer sozialen Inklusion nicht negativer beurteilt, wenn keine negativen Nennungen gemessen werden (Frostad & Pijl, 2007). Um die Validität der Messungen zu gewährleisten, beinhaltete die Operationalisierung des sozialen Kontaktes mehrere Facetten. Dabei wurden die drei wichtigsten Aspekte gemessen, welche als zentral für die Entstehung von Freundschaften in der Kindheit angesehen werden: Gemeinsames Spiel, Freizeit und Vertrauen (Dunn, 1993). Die sozialen Beziehungen eines Kindes wurden mit folgenden Fragen erhoben: „Mit welchen Kindern aus deiner Klasse sprichst du am meisten?“, „Mit welchen Kindern aus deiner Klasse spielst du in der Pause?“, „Mit welchen Kindern aus deiner Klasse triffst du dich in deiner Freizeit?“ und „Welchen Kindern aus deiner Klasse erzählst du von Geheimnissen?“. Die Kinder nannten auf die oben beschriebenen Fragen alle Kinder der Klasse, mit denen sie diese spezifische Beziehung führten. Dabei wurde die Anzahl der Wahlen freigestellt. Da mithilfe dieses Vorgehens Struktureigenschaften des Netzwerks genauer erfasst werden können, wurde die Reliabilität der Messungen gesteigert (Jansen, 2006).

Basierend auf den Wahlen der Kinder wurde in der Statistikumgebung R für jede Klasse und jede Frage ein soziales Netzwerk erstellt. Daraus wurden die sozialen Beziehungen der Kinder ermittelt. Soziale Interaktionen und Freundschaften wurden dabei über beidseitige Wahlen (a-b und b-a) definiert. Die Erfassung indirekter Beziehungen erfolgte mittels geodesischer Distanz. Im Durchschnitt wählten die Kinder pro Frage 3 Personen (M = 3.10, SD = 1.31).

Masse der sozialen Inklusion. Um die soziale Inklusion der Lernenden in den Klassen zu beurteilen, wurden drei verschiedene Netzwerkmasse berechnet: Der Indegree für die Beliebtheit (Mass 1), das Mass für Freundschaften (Mass 2) und das Mass für die Zugehörigkeit und Zentralität in Cliquen (Mass 3).

Der Indegree (Mass 1) steht für die Zahl der empfangenen Wahlen und somit für die Beliebtheit eines Kindes. Um die verschiedenen Klassen hinsichtlich des Indegrees vergleichen zu können, wird von der Anzahl der Wahlen eines Kindes die durchschnittliche Anzahl der Wahlen in der Klasse abgezogen. In einem zweiten Schritt wird diese Differenz durch die Varianz der Wahlen in der Klasse geteilt. Mit dieser Standardisierung werden die Unterschiede zwischen den Klassen eliminiert. Da wir eine Vergleichbarkeit mit den oben berichteten Studien zur sozialen Akzeptanz gewährleisten wollten, haben wir das gleiche Vorgehen der Standardisierung gewählt, wie es in den meisten Studien angewendet wurde (vgl. Tabelle 1).

Um die Freundschaftsbeziehungen der Kinder zu messen (Mass 2), wurde für jedes Kind die Anzahl gegenseitiger Beziehungen berechnet (Richard & Rice, 1981). Dieses Vorgehen ist analog zu den Studien in Tabelle 1, welche die Freundschaftsbeziehungen der Kinder gemessen haben (Frostad & Pijl, 2007; Juvonen & Baer, 1992; Vaughn et al., 1996; Yude et al., 1998). Die meisten dieser Studien berücksichtigen jedoch nicht, dass diese Angabe auch von der Klassengrösse abhängig ist (Juvonen & Baer, 1992; Vaughn et al., 1996; Yude et al., 1998). Daher wurden die Anzahl der Freundschaften anhand der maximal möglichen gegenseitigen Beziehungen in der Klasse ((n*(n-1))/2) standardisiert.

Da die beschriebenen Masse 1 und 2 für jede Frage und somit für jedes Netzwerk, das aus den Wahlen der Kinder besteht, separat berechnet werden mussten, wurde aus den jeweils vier Netzwerken zu den vier Kontaktfragen eine Mittelwertskala erstellt. Die interne Konsistenz der Skalen war für die Indegrees (Mass 1) α = .83 und das soziale Integrationsmass mit gegenseitigen Wahlen (Mass 2) α = .79.

Um die Zugehörigkeit der Kinder in Cliquen zu bestimmen, wurde in der Statistikumgebung R ein Algorithmus programmiert, der verschiedene Kriterien der

Cliquenidentifikation nach Richard und Rice (1981) enthält (Mass 3). Dabei muss jedes Kind mindestens zwei gegenseitige Freundschaften haben (1), mindestens 50% aller Freundschaften müssen in der Clique sein (2) und jedes Kind ist direkt oder indirekt maximal über zwei Kanten verbunden (z. B. erreicht Kind C das Kind B indirekt über das Kind E oder das Kind G, vgl. Abb. 1). Da sich die verschiedenen Cliquen innerhalb eines Netzwerkes stark überlappen können (Kindermann & Gest, 2007), wurde für jedes Kind diejenige Clique bestimmt, in der das Kind die höchste Nähe zu allen anderen Mitgliedern aufwies (Closeness). Durch die Bestimmung der Clique als Individualmerkmal wird berücksichtigt, dass die Cliquenzugehörigkeit aus Sicht des Individuums unterschiedlich erlebt werden kann (Kindermann & Gest, 2007). Da wir an der sozialen Teilhabe von Kindern mit SFB in Cliquen interessiert waren, stellte die maximale Nähe eines Kindes in der Gruppe ein adäquates Kriterium dar. Wir nahmen dabei an, dass die soziale Position, die ein Kind in einer Clique einnimmt, aussagekräftiger ist als die blosse Gruppenzugehörigkeit (Estell et al., 2008). Die Closeness Zentralität gibt dabei den Kehrwert der Summe aller kürzesten Verbindungen eines Kindes zu allen anderen Mitgliedern der Clique an. Um Werte unterschiedlich grosser und dichter Netze vergleichen zu können, wird dieser Wert zudem mit der grösstmöglichen Closeness $1/(n\text{-}1)$ standardisiert (Jansen, 2006).

Angaben der Lehrperson zur sozialen Inklusion der Lernenden. Um nebst den aus den Aussagen der Schüler gewonnen Angaben eine weitere Angabe für die soziale Teilhabe der Kinder zu haben, wurden die Lehrpersonen gebeten, jeweils für jedes Kind zu beurteilen, ob es eine Aussenseiterrolle in der Klasse einnimmt (0 = nein, 1 = ja). Aus den Angaben in Tabelle 2 wird ersichtlich, dass die Angaben der Lehrperson mit den drei Massen korrelierten (Mass 1, Beliebtheit: $r = .30$, $p < .001$, Mass 2, Freundschaften: $r = .12$, $p < .05$, Mass 3, Zentralität in Cliquen: $r = .21$, $p < .001$. Diese leichten bis mittleren, jedoch signifikanten Korrelationen sprechen für die Validität der drei konzipierten Masse. Da Lehrpersonen dazu tendieren, die soziale Inklusion von Kindern mit SFB zu überschätzen (Scheepstra et al., 1999), wurden keine hohen Korrelationen erwartet.

Heterogenität der Schulklasse. Die Heterogenität der Schulklasse wurde mit dem Diversitäts-Index von Simpson (1949) berechnet. Hierbei wird die Anzahl der Kinder pro Diversitätsmerkmal an der Anzahl Kinder einer Klasse standardisiert. In dieser Studie wurden die Anzahl Kinder mit SFB sowie die Anzahl Kinder ohne SFB jeweils an der Klassengrösse standardisiert. Die quadrierte Summe dieses Produktes ergibt den Simpson-Index, der anzeigt, wie heterogen die Schulklasse im Bezug auf die Anzahl Kinder mit SFB ist. Dieser Wert

wurde dann von 1 abgezogen, sodass ein Wert von 0 eine Klasse ohne Kinder mit SFB darstellen würde und bei einem Wert von 1, hätten alle Kinder in der Klasse einen SFB.

6.2.4 Datenanalyse

Da die Lernenden in dieser Studie aus verschiedenen Klassen stammten, waren die Daten von Kindern aus der gleichen Klasse voneinander abhängig. Es ist anzunehmen, dass bei den Kindern innerhalb einer Klasse mehr Ähnlichkeiten bestehen, als zwischen den Klassen. Die soziale Inklusion der Lernenden könnte beispielsweise nicht nur von individuellen Faktoren abhängen, sondern auch von der Einstellung der Lehrperson beeinflusst werden (Grütter & Meyer, 2014). Durch die Verwendung von hierarchisch linearen Modellen können solche Gegebenheiten berücksichtigt werden (Gelman & Hill, 2007). Ferner lagen für jedes Kind drei Masse für dessen soziale Inklusion vor, weshalb diese drei Werte eines Kindes nicht voneinander unabhängig sind. Somit lag auch hier eine hierarchische Datenstruktur vor, die ein Mehrebenenmodell erfordert (Gelman & Hill, 2007). Da die drei Netzwerkmasse alle die soziale Inklusion eines Kindes ausdrücken, wurden sie für jedes Kind als drei unterschiedliche Messungen der *Sozialen Inklusion* geführt. Um die Vergleichbarkeit der drei Masse herzustellen, wurden sie anhand des Mittelwertes und der Standardabweichung aller Daten standardisiert (z-standardisiert). Der Datensatz wurde so angeordnet, dass es pro Kind drei Zeilen mit den drei Masstypen der sozialen Inklusion gab. Anders ausgedrückt wurden die drei Netzwerkmasse für jedes Kind als Variable soziale Inklusion mit den drei Messwiederholungen Indegree, Freundschaften und Zentralität in Cliquen behandelt.

Die Ergebnisse vorgängiger Datenanalysen zeigen, dass sich die soziale Inklusion der Kinder in der Klasse signifikant zwischen den Klassen unterschied ($F(19, 1294) = 4.81$, $p < .001$). Dabei konnten 5.5% der Varianz in der sozialen Inklusion durch die Klassenzugehörigkeit erklärt werden (*ICC(1)* = .055). Auch auf der Ebene der Kinder unterschied sich die Inklusion, die sich aus den drei Massen zusammensetzt, in Abhängigkeit des jeweiligen Kindes signifikant voneinander ($F(437, 876) = 2.04$, $p < .001$), wobei 25.7% der Varianz der sozialen Inklusion durch die Abhängigkeit der Daten vom jeweiligen Kind erklärt werden konnte (*ICC(1)* = .26). Es lag also eine hierarchische Datenstruktur mit drei verschiedenen Ebenen vor (Ebene 3: Schulklassen, Ebene 2: Kinder, Ebene 1: Werte in den drei Netzwerkmassen) vor und der Einsatz von Mehrebenemodellen war angebracht. Die Verwendung dieser Methode erlaubte es, sowohl die Abhängigkeit der Daten von der Klassenzugehörigkeit als auch vom jeweiligen Kind zu berücksichtigen. Diese

Mehrebenenmodelle wurden mit dem R-Paket lme4 (Version 1.04) berechnet (Bates, Maechler, Bolker, & Walker, 2014).

6.3 Ergebnisse

6.3.1 Soziale Inklusion von Kindern mit besonderen Bedürfnissen

Um die drei Annahmen bezüglich der sozialen Inklusion von Kindern mit unterschiedlicher Intensität der sonderpädagogischen Förderung zu testen, berechneten wir ein hierarchisches lineares Modell. Es enthielt die soziale Inklusion als abhängige Variable und die Prädiktoren Heterogenität in der Klasse, sonderpädagogischer Förderbedarf des Kindes (keinen / leicht / mittel / hoch) sowie der Art des verwendeten Masses (Beliebtheit (Mass 1) / Freundschaften (Mass 2) / Zentralität in Cliquen (Mass 3)), wobei wir für die möglichen Einflüsse des Geschlechtes und des Alters kontrollierten. Da wir annahmen, dass die Art des verwendeten Masses die soziale Inklusion von Kindern in Abhängigkeit des Förderbedarfs beeinflusst, wurde dem Modell die Interaktion zwischen der Art des verwendeten Masses und der Intensität des SFB hinzugefügt. Um die Abhängigkeit der Daten von der jeweiligen Klasse und vom jeweiligen Kind zu berücksichtigen, durften die Mittelwerte für die soziale Inklusion für jede Klasse und jedes Kind zwischen den Klassen bzw. den Kindern variieren (Random-Intercept-Modell).

Die Resultate dieses Modelles (vgl. Tabelle 3) zeigen, dass Kinder, die älter waren als zehn Jahre (mittleres Alter), im Durchschnitt eine leicht bessere Inklusion hatten als jüngere Kinder ($\gamma = 0.12$, SE = 0.04, $z = 3.40$, $p < .001$), jedoch unabhängig von Förderbedarf oder Mass. Da die Inklusion so standardisiert war, dass der Wert 0 dem Stichprobenmittelwert entspricht, bedeutet dies, dass das Modell für diese Kinder eine durchschnittliche Inklusion vorhersagt. Für den Vergleich der unterschiedlichen Netzwerkmasse stellten Freundschaften (Mass 2) hierbei den Vergleichswert dar. Da weder Kinder mit leichtem ($\gamma = 0.00$, $SE = 0.21$, $z = 0.02$), mittlerem ($\gamma = -0.12$, $SE = 0.17$, $z = -0.73$) noch höherem SFB ($\gamma = -0.19$, $SE = 0.35$, $z = -0.55$) einen signifikant höheren oder tieferen Wert als Kinder ohne SFB in der sozialen Inklusion erreichten, gab es keinen Unterschied zu Kindern mit SFB, wenn das Mass Freundschaften (Mass 2) für die soziale Integration verwendet wurde.

Wurde die soziale Inklusion durch den Fokus auf gegenseitige Freundschaftsbeziehungen gemessen, dann waren alle Kinder mit und ohne SFB gleich gut integriert (vgl. Abb. 2). Abbildung 2 gibt einen Überblick über die vorhergesagte Inklusion bei der Verwendung der verschiedenen Masse und in Abhängigkeit des sonderpädagogischen Förderbedarfes. Wurde die Beliebtheit bzw. der Indegree (Mass 1) zur Erfassung der sozialen

Inklusion verwendet, bestanden im Vergleich zu der Erfassung der sozialen Teilhabe mittels Mass 2 (Freundschaften) signifikante Unterschiede darin, ob diese Masse zwischen Kindern mit verschiedener Intensität des Förderbedarfs trennen. So waren Kinder mit leichtem SFB im Vergleich zu Kindern ohne SFB signifikant weniger beliebt (γ = -0.76, *SE* = 0.25, *z* = -3.00, *p* < .01). Ein ähnliches Ergebnis zeigte sich für Kinder mit mittlerem (γ = -0.60, *SE* = 0.21, *z* = -2.91, *p* < .01) und hohem SFB (γ = -0.84, *SE* = 0.43, *z* = -1.94, *p* < .1) im Vergleich zu Kindern ohne SFB. Wurde das Mass 3 (Zentralität in Cliquen) für die Bestimmung der sozialen Inklusion verwendet, so schnitten Kinder mit leichtem (γ = -0.59, *SE* = 0.25, *z* = -2.32, *p* < .05) und mittlerem SFB (γ = -0.69, *SE* = 0.21, *z* = -3.35, *p* < .001) im Vergleich zu den Werten im Mass 2 (Freundschaften) signifikant schlechter ab als Kinder ohne SFB. Hingegen nahmen Kinder mit hohem SFB nicht signifikant weniger zentrale Positionen in Schülercliquen ein als Kinder ohne SFB (γ = -0.34, *SE* = 0.43, *z* = -0.79). Da jedoch in dieser Gruppe nur 8 Kinder vertreten waren, könnte dieses Resultat auch aufgrund mangelnder Teststärke entstanden sein. Da die soziale Inklusion je nach Intensität des Förderbedarfs der Kinder und des verwendeten Masses variierte, konnte die Hypothese 1 angenommen werden. Da es keinen Unterschied in der sozialen Inklusion in Abhängigkeit des Förderbedarfs der Kinder gab, wenn Freundschaften gemessen wurden, jedoch Kinder mit leichtem und mittlerem SFB signifikant weniger in Cliquen integriert waren als Kinder ohne SFB, konnte die Hypothese 2 nur teilweise angenommen werden.

Aus dem Modell geht zudem hervor, dass die soziale Inklusion der Kinder in der Klasse mit zunehmender Heterogenität in der Schulklasse signifikant höher ausfiel (γ = 1.05, *SE* = 0.37, *z* = 2.82, *p* < .01). Hypothese drei konnte somit angenommen werden. Das angenommene Modell erklärt insgesamt 6.7% der Gesamtvarianz. Um den Anteil der aufgeklärten Varianz der Heterogenität in den Klassen zu bestimmen, wurde ein Modell berechnet, bei dem die Heterogenität nicht berücksichtigt wurde. Da wir annahmen, dass die Heterogenität der Schulklasse einen Teil des Unterschiedes in der sozialen Inklusion der Kinder zwischen den verschiedenen Klassen erklären kann, wurde berechnet, wie viel Varianz zwischen den Klassen durch diesen kontextuellen Faktor erklärt werden konnte. Dabei wurde die Varianz zwischen den Klassen des Modells mit der Heterogenität der Schulklasse als Prädiktor zur Varianz zwischen den Klassen ohne diesen Prädiktor ins Verhältnis gesetzt und dieser Wert von 1 abgezogen. Dabei wurde deutlich, dass die Heterogenität der Schulklasse 17.4% der Unterschiede in der sozialen Teilhabe der Kinder erklären kann (Between-group pseudo R^2 = .17).

Abbildung 2 zeigt, dass sich Kinder mit unterschiedlicher Intensität des SFB signifikant in der sozialen Inklusion unterschieden, wenn Mass 1 (Beliebtheit) oder Mass 3 (Zentralität in Cliquen) angewendet wurden. Dabei waren Kinder mit leichtem und mittlerem SFB signifikant weniger beliebt und weniger zentral in Cliquen integriert als Kinder ohne SFB. Kinder mit hohem SFB waren marginal signifikant weniger beliebt als Kinder ohne SFB, nahmen aber nicht signifikant schlechtere soziale Positionen in Cliquen ein wie Kinder mit SFB. Wurden gegenseitige Freundschaftsbeziehungen betrachtet (Mass 2), waren Kinder mit SFB sozial gleich gut integriert wie die anderen Kinder in ihrer Klasse.

6.4 Diskussion

Dieser Artikel setzt sich mit der Frage auseinander, warum die Forschungslage zur sozialen Inklusion von Kindern mit SFB nicht eindeutig ist.

Die Resultate stimmen mit der Annahme überein, dass die Beurteilung der sozialen Inklusion der Lernenden von der Intensität des sonderpädagogischen Förderbedarfs und dem jeweils verwendeten Netzwerkmass abhängig ist. Bei der Messung von sozialer Inklusion muss folglich eine ganzheitliche Betrachtung der sozialen Beziehungen eines Kindes stattfinden (Cullinan et al., 1992; Farell, 2000). Wurde der Aspekt der Gegenseitigkeit von sozialen Interaktionen berücksichtigt und die Anzahl der gegenseitigen Freundschaften betrachtet, waren Lernende mit SFB in dieser Studie nicht schlechter integriert als ihre Klassenkameradinnen und -Kameraden. Wenn die Beliebtheit der Kinder bewertet wurde, waren Kinder mit leichtem und mittlerem SFB im Vergleich dazu signifikant weniger, und Kinder mit hohem SFB marginal signifikant weniger sozial integriert als Lernende ohne SFB. Dieses Ergebnis stimmt mit der aktuellen Forschungslage zur signifikant schlechteren Beliebtheit von Kindern mit SFB im Vergleich zu ihren Mitschülern überein (z. B. Cambra & Silvestre, 2003; Huber & Wilbert, 2012, siehe Tabelle 1). Wurde die Zugehörigkeit und Zentralität in Schülercliquen als Mass für die soziale Inklusion verwendet, so waren Kinder mit leichtem und mittlerem SFB, nicht aber Lernende mit hohem SFB signifikant schlechter integriert als Kinder ohne SFB. Folglich sind gegenseitige Beziehungen trotz der positiven Konsequenzen auf die soziale Entwicklung eines Kindes (Parker & Asher, 1997) keine Garantie für eine gleichermassen intensive soziale Teilhabe an Aktivitäten von Schülercliquen. Dieses Resultat widerspricht nicht nur der zweiten Annahme dieser Studie, dass bei der Erfassung von gegenseitigen Beziehungen keine Unterschiede in der sozialen Akzeptanz von Kindern mit und ohne SFB bestehen, sondern auch den Ergebnissen von Frostad und Pijl (2007). Bei der Studie dieser Autoren ging die soziale Akzeptanz eines

Kindes mit mehr Freundschaften sowie einer höheren Teilnahme an Schülercliquen einher. Soziale Inklusion ist somit kein linearer Prozess und mögliche Interventionen zur Verbesserung der sozialen Teilhabe von Kindern mit SFB sollten äquivalent zu deren Erfassung in einer ganzheitlichen Art und Weise stattfinden und an verschiedenen Punkten ansetzen.

Die Ergebnisse dieser Studie weisen darauf hin, dass neben Kindern mit mittlerem SFB auch Kinder mit leichtem SFB weniger beliebt und weniger häufig und zentral in Schülercliquen integriert waren als Kindern ohne SFB. Dieses Resultat ist damit vergleichbar mit bisherigen Studien, bei denen Kinder mit tiefen Schulleistungen (Vaughn et al., 1996) oder mit spezifischen Schwierigkeiten im Lernen (Bakker et al., 2007) einen ähnlich tiefen Wert in der Beliebtheit erreichten wie Kinder mit einer diagnostizierten Lernbehinderung. Eine mögliche Erklärung für dieses Resultat könnte darin liegen, dass Kinder mit leichtem SFB im schulischen Alltag oft untergehen (Jordan, Schwartz, & McGhie-Richmond, 2009; Vaughn et al., 1996). Studien zur Anwendung inklusiver Praktiken bei Lehrpersonen zeigten beispielsweise, dass Lehrpersonen, die der schulischen Inklusion von Kindern mit SFB positiv gegenüberstanden, reichhaltigere Instruktionen an Kinder mit SFB gaben und diesen Lernenden mehr Zuwendung schenkten. Dies war nicht der Fall für Lernende, welche ein hohes Risiko für schlechte Leistungen aufwiesen, aber offiziell nicht als Kinder mit SFB betrachtet wurden (Jordan et al., 2009).

Neben der Intensität des sonderpädagogischen Förderbedarfs und dem verwendeten Mass zur Erfassung der sozialen Inklusion ist auch der schulische Kontext für die soziale Teilhabe der Lernenden von Bedeutung. So bestanden in dieser Studie wesentliche Unterschiede in der Inklusion zwischen den Klassen, wobei 5.5% der Varianz in der sozialen Inklusion durch die Klassenzugehörigkeit erklärt werden konnte. Ein kontextueller Aspekt, der 17% dieser Unterschiede zwischen den Klassen aufklärte, ist die Heterogenität der Schulklasse. So stieg die soziale Teilhabe aller Lernenden mit zunehmender Heterogenität der Schulklasse. Dabei ist denkbar, dass nicht nur die Unterschiedlichkeit an sich, sondern auch ein positiver Umgang mit Heterogenität in der Klasse zu einer erhöhten sozialen Inklusion beiträgt (Cambra & Silvestre, 2003; Grütter & Meyer, 2014).

Neben dem wichtigen Aspekt der Schaffung einer inklusiven Schulkultur, die mit inklusiven Haltungen einhergeht (Jordan et al., 2009), kann die soziale Akzeptanz von Kindern mit SFB auch gezielt verbessert werden. Viele Interventionsprogramme fokussieren dabei auf die Förderung möglicher sozialer, kognitiver und emotionaler Kompetenzen von Kindern mit SFB, wobei sich der Fokus auf das Kind bisher als wenig wirksam erwies

(Kavale & Mostert, 2004). Interventionen zur Verbesserung der sozialen Inklusion von Kindern mit SFB sollten daher nicht nur beim Kind ansetzen, sondern an verschiedenen Teilbereichen (Beliebtheit, Freundschaften, Cliquenzugehörigkeit) der sozialen Beziehungen in der Klasse. Um die Beliebtheit eines Kindes zu erhöhen, können Lehrpersonen herausfinden, welche Werte bei den Lernenden der Klasse als „cool“ angesehen werden. Danach können sie diese Eigenschaften bewusst bei Kindern mit SFB verstärken und in der Klasse hervorheben (Cullinan et al., 1992). Um eine ganzheitliche Förderung der sozialen Kontakte eines Kindes zu erreichen, sollten zudem auch Möglichkeiten für den Aufbau von gegenseitigen Freundschaften geschaffen und die Teilhabe an Aktivitäten von Schülergruppen angestrebt werden. Beispielsweise können für den Unterricht spezifische Gruppenaktivitäten geplant werden, bei denen Kinder um ein gemeinsames Ziel zu erreichen nicht nur zusammenarbeiten, sondern auch miteinander kommunizieren müssen. Daneben können auch Aktivitäten ausserhalb des Unterrichts geplant werden, um positive Interaktionen zwischen den Lernenden zu ermöglichen (Cambra & Silverstre, 2003). Da sich auch das Verhalten der Lehrperson in der Schulklasse auf die soziale Akzeptanz von Kindern mit SFB auswirken kann, sollte darauf geachtet werden, in welcher Art und Weise Rückmeldungen an die Kinder gegeben werden (Huber, 2011). So steigt oder sinkt die Intention zur Kontaktaufnahme mit Kindern mit SFB, je nach Valenz der Äusserungen von Lehrpersonen (Huber, 2011).

Neben den praktischen Implikationen, die mit den Ergebnissen dieser Studie einhergehen, hat diese Studie auch politische Implikationen. Eine der Grundideen der inklusiven Schulung von Kindern mit SFB liegt in der Annahme, dass Schüler mit SFB stärker an gesellschaftlichen Aktivitäten teilnehmen und ihr Sozialkapital aufbauen können (UNESCO, 1994). Wird die soziale Inklusion eines Kindes bewertet, ist dies mit einer Bewertung der sozialen Partizipationsmöglichkeiten dieser Kinder verbunden (Lindsay, 2007; Nakken & Pijl, 2002) und birgt die Gefahr in sich, dass deren soziale Teilhabe als unzureichend betrachtet wird. Daher bringt die Verwendung eines bestimmten Masses eine soziale Verantwortung für den jeweiligen Forscher bzw. die jeweilige Forscherin mit sich.

Diese Studie ist mit Einschränkungen verbunden. So kann nicht eindeutig festgestellt werden, dass sich der jeweilige SFB auf die soziale Teilhabe der Lernenden auswirkt. Es wäre auch denkbar, dass mit einer höheren sozialen Akzeptanz weniger sonderpädagogische Unterstützung benötigt wird. Um dies zu klären, müsste eine Langzeitstudie durchgeführt werden. Dabei könnte auch geklärt werden, ob Lernende mit gegenseitigen Freundschaften längerfristig auch stärker in Schülercliquen eingebunden sind. Beispielsweise könnten in der vorliegenden Studie Freundschaften erst kürzlich entstanden sein und noch nicht zu einer

verstärkten Teilnahme an Aktivitäten von Schülercliquen geführt haben. Zudem wären zusätzliche Informationen zum Wohlbefinden und der selbst eingeschätzten sozialen Akzeptanz der Kinder wünschenswert (z. B. Cambra & Silvestre, 2003; Huber & Wilbert, 2012; Juvonen & Baer, 1992). Dadurch könnte untersucht werden, ob sich die Unterschiede in den verschiedenen Netzwerkmassen in den selbst berichteten Informationen der Kinder zeigen.

Die Resultate dieser Studie sprechen dafür, bei der Beurteilung der sozialen Inklusion von Kindern mit SFB ein ganzheitliches Bild der sozialen Interaktionen zu erfassen, wobei nicht nur die soziale Akzeptanz, sondern auch gegenseitige Freundschaftsbeziehungen sowie die soziale Position in Schülercliquen gemessen werden sollten. Zudem weisen die Ergebnisse darauf hin, dass zwischen den Klassen starke Unterschiede in der sozialen Akzeptanz bestehen. Daher sollten verstärkt kontextuelle Bedingungen im Klassenzimmer mit einbezogen und der Fokus weg vom Kind gerichtet werden. Wie es das Konzept von Inklusion vorsieht (Boban & Hinz, 2003), sind es nicht die speziellen Kinder, die in die Schule integriert werden, sondern es ist das schulische Umfeld, das so gestaltet werden muss, dass es auf den Unterschieden zwischen den Kindern aufbaut und jedes Kind zu einem besonderen Kind macht.

Literatur

Bakker, J. T. A., Denessen, E., Bosman, A. M. T., Krijger, E.-M., & Bouts, L. (2007). Sociometric status and self-image of children with specific and general learning disabilities in Dutch general special education classes. *Learning Disabilities Quarterly, 30*, 47-62. doi: 10.2307/30035515

Bates, D., Maechler, M., Bolker, B., & Walker, S. (2014). *lme4: Linear mixed-effects models using eigen and s4* [Computer software manual]. Retrieved 20.09.2014 from http://CRAN.R-project.org/package=lme4 (R package version 1.0-6)

Biermann, K. L. (2004). *Peer rejection: Developmental processes and intervention strategies.* New York: Guilford Press.

Boban, I. & Hinz, A. (2003). *Index für Inklusion. Lernen und Teilhabe in der Schule der Vielfalt entwickeln.* Halle Wittenberg: Martin-Luther-Universität. (Original erschienen 2000: Index of Inclusion: Developing learning and participation in schools)

Bless, G. (2000). Schulische und ausserschulische Integration behinderter Menschen unter psychologischen Aspekten: Lernbehinderungen. In J. Borchert (Ed..), *Handbuch der sonderpädagogischen Psychologie* (S. 440-453). Göttingen: Hogrefe.

Buhs, E. S., Ladd, G. W., & Herald, S. L. (2006). Peer exclusion and victimization: Processes that mediate the relation between peer group rejection and children's classroom engagement and achievement? *Journal of Educational Psychology, 98*, 1-13. doi: 10.1037/0022-0663.98.1.1

Cambra, C. & Silvestre, N. (2003). Students with special educational needs in the inclusive classroom: Social integration and self-concept. *European Journal of Special Needs Education, 18*, 197-208. doi: 10.1080/0885625032000078989

Chang, L. (2004). The role of classroom norms in contextualizing the relations of children´s social behavior to peer acceptance. *Developmental Psychology, 40*, 691-702. doi: 10.1037/0012-1649.40.5.691

Cloerkes, G. (2001). *Soziologie der Behinderten* (2. Aufl.). Heidelberg: Edition S.

Coie, J. D. & Dodge, K. A. (1988). Multiple sources of data on social behavior and social status in the school: A cross-age comparison. *Child Development, 59*, 815-829. doi: 10.2307/1130578

Cullinan, D., Sabornie, E. J., & Crossland, C. L. (1992) Social mainstreaming of mildly handicapped students. *Elementary School Journal, 92*, 339-351. doi: 10.1086/461696

De Monchy, M., Pijl, S. J., & Zandberg, T. J. (2004) Discrepancies in judging social inclusion and bullying of pupils with behavior problems. *European Journal of Special Needs Education, 19*, 317-330. doi: 10.1080/0885625042000262488

Dunn, J. (1993). Young children's close relationships: Beyond attachment. In R. Plomin (Series Ed.), *Sage series on individual differences and development: Vol. 4*. Newbury Park, London: Sage Publications.

Estell, D. B., Jones, M. H., Pearl, R., van Acker, R., Farmer, T. W., & Rodkin, J. (2008). Peer groups, popularity, and social preference: Trajectories of social functioning among students with and without learning disabilities. *Journal of Learning Disabilities, 41*, 5-14. doi: 10.1177/0022219407310993

Farell P. (2000) The impact of research on developments in inclusive education. *International Journal of Inclusive Education 4*, 153-62. doi: 10.1080/136031100284867

Feuser, G. (1995). *Behinderte Kinder und Jugendliche: Zwischen Integration und Aussonderung*. Darmstadt: Wissenschaftliche Buchgesellschaft.

Frostad, P. & Pijl, S. J. (2007). Does being friendly help in making friends ? The relation between the social position and social skills of pupils with special needs in mainstream education. *European Journal of Special Needs Education, 22*, 15-30. doi: 10.1080/08856250601082224

Gelman, A. & Hill, J. (2007). *Data analysis using regression and multilevel/hierarchical models*. Cambridge: University Press.

Grütter, J., & Meyer, B. (2014). Intergroup friendship and children's intentions for social exclusion in integrative classrooms: The moderating role of diversity beliefs. *Journal of Applied Social Psychology, 44*, 481-494. doi: 10.1111/jasp.12240

Huber, C. (2009). Soziale Ausgrenzung in der Integration von Schülern mit sonderpädagogischem Förderbedarf: Zusammenhang von Persönlichkeit, Gruppenheterogenität und sozialer Ausgrenzung. *Empirische Pädagogik, 23*, 170-190.

Huber, C. (2011). Lehrerfeedback und soziale Integration. Wie soziale Referenzierungsprozesse die soziale Integration in der Schule beeinflussen können. *Empirische Sonderpädagogik, 1*, 20-36.

Huber, C. & Wilbert, J. (2012). Soziale Ausgrenzung von Schülern mit sonderpädagogischem Förderbedarf und niedrigen Schulleistungen im gemeinsamen Unterricht. *Empirische Sonderpädagogik, 2*, 147-165.

Jansen, D. (2006). *Einführung in die Netzwerkanalyse. Grundlagen, Methoden, Forschungsbeispiele* (3. Aufl.). Wiesbaden: Verlag für Sozialwissenschaften.

Jordan, A., Glenn, C., & McGhie-Richmond, D. (2010). The supporting effective teaching (SET) project: The relationship of inclusive teaching practices to teachers' beliefs about disability and ability, and about their roles as teachers. *Teaching and Teacher Education, 26*, 259-266. doi: 10.1016/j.tate.2009.03.005

Juvonen, J. & Baer, G. (1992). Social adjustment of children with and without learning disabilities in integrated classrooms. *Journal of Educational Psychology, 84*, 322-330. doi: 10.1037/0022-0663.84.3.322

Juvonen, J., Nishina, A., & Graham, S. (2006). Ethnic diversity and perceptions of safety in urban middle schools. *Psychological Science, 17*, 393-400. doi: 10.1111/j.1467-9280.2006.01718.x

Kavale, K. A. & Forness, S. R. (1996). Social skill deficits and learning disabilities: A meta-analysis. *Journal of Learning Disabilities, 29*, 226-237. doi: 10.1177 /002221949602900301

Kavale, K. A. & Mostert, M. P. (2004). Social skills interventions for individuals with learning disabilities. *Learning Disability Quarterly, 27*, 31-43. doi: 10.2307/1593630

Killen, M. & Rutland, A. (2011). *Children and social exclusion: Morality, prejudice and group identity*. New York: Wiley/Blackwell Publishers. doi: 10.1002/9781444396317

Kinderman, T. A. & Gest, S. D. (2007). Assessment of the peer group. Identifying naturally occurring social networks and capturing their effects. In K. H. Rubin, W. M. Bukowski & B. Laursen (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 100-117). New York: Guilford Press.

Lindsay, G. (2007). Educational psychology and the effectiveness of inclusive education/mainstreaming. *British Journal of Educational Psychology, 77*, 1-24. doi: 10.1348/000709906X156881

Malti, T., Killen, M., & Gasser, L. (2012). Social judgments and emotion attributes about exclusion in Switzerland. *Child Development, 83*, 697-711. doi: 10.1111/cdev.12124

Mikami, A.Y., Lerner, M.D., & Lun, J. (2010) Social context influences on children's rejection by their peers. *Child Development Perspectives, 4*, 123-130. doi: 10.1111/j.1750-8606.2010.00130.x

Moreno, J. L. (1974). *Die Grundlagen der Soziometrie: Wege zur Neuordnung der Gesellschaft.* Opladen: Westdeutscher Verlag.

Nakken, H. & Pijl, S. J. (2002). Getting along with classmates in regular schools: A review of the effects of integration on the development of social relationships. *International Journal of Inclusive Education, 6*, 47-61. doi: 10.1080/13603110110051386

Nowicky, E. A. (2003). A meta-analysis of the social competence of children with learning disabilities compared to classmates of low and average to high achievement. *Learning Disability Quarterly, 26*, 171-188. doi: 10.2307/1593650

Organisation der Vereinten Nationen für Erziehung, Wissenschaft und Kultur. (1994). *Die Salamanca Erklärung und der Aktionsrahmen zur Pädagogik für besondere Bedürfnisse.* Zugriff unter http://www.unesco.at./bildung/basisdokumente/ salamanca_erklaerung.pdf

Organization for Economic Co-operation and Development. (1995) *Integrating pupils with special needs into mainstream schools.* Paris: OECD Publishing

Parker, J. G., & Asher, S. R. (1987). Peer relations and later personal adjustment: Are low accepted children at risk ? *Psychological Bulletin, 102*, 357-389. doi: 10.1037/0033-2909.102.3.357

Pearl, R., Farmer, T. W., van Acker, R., Rodkin, P. C., Bost, K. K., Coe, M., & Henley, W. (1998). The social integration of students with mild disabilities in general education classrooms: Peer group membership and peer-assessed social behavior. *The Elementary School Journal, 99*, 167-185. doi: 10.1086/461921

Pijl, S. J. & Frostad, P. (2010). Peer acceptance and self-concept of students with disabilities in regular education. *European Journal of Special Needs Education, 25*, 93-105. doi: 10.1080/08856250903450947

Powell, J. J. W. (2006). Special education and the risk of becoming less educated. *European Societies, 8*, 577-599. doi: 10.1080/14616690601002673

Richard, W.D. & Rice, R.E. (1981). The NEGOPY network analysis program. *Social Networks, 3*, 215-223. doi: 10.1016/0378-8733(81)90017-4

Ruijs, N. M. & Peetsma, T. T. D. (2009). Effects of inclusion on students with and without special educational needs reviewed. *Educational Research Review, 4*, 67-79. doi: 10.1016/j.edurev.2009.02.002

Scheepstra, A. J. M., Nakken, H., & Pijl, S. J. (1999). Contacts with classmates: The social position of pupils with Down's syndrome in Dutch mainstream education. *European Journal of Special Needs Education, 14*, 212-220. doi: 10.1080/0885625990140303

Simpson, E.H. (1949). Measurement of diversity. *Nature, 163*, 688. doi: 10.1038/163688a0

Vaughn, S., Elbaum, B. E., & Schumm, S. (1996). The effects of inclusion on the social functioning of students with learning disabilities. *Journal of Learning Disabilities, 29*, 598-608. doi: 10.1177/002221949602900604

Wiener, J. & Tardif, C. Y. (2004). Social and emotional functioning of children with learning disabilities: Does special education placement make a difference? *Learning Disabilities Research and Practice, 19*, 20-32. doi: 10.1111/j.1540-5826.2004.00086.x

Yude, C., Goodman, R., & McConachie, H. (1998). Peer problems of children with hemiplegia in mainstream schools. *Journal of Child Psychology and Psychiatry, 39*, 533-541. doi: 10.1111/1469-7610.00349

Tabelle 1 *Übersichtstabelle*

Autoren	Art des sonderpädagogischen Förderbedarfs (SFB)	Alter (Jahre)	*n*	Operationalisierung (verwendetes Mass)	Hauptbefunde
Bakker et al. (2007).	leichter und hoher Förderbedarf im Bereich Lernen (Lernbehinderung)	7-12	1300	Beliebtheit - Zurückweisung: jeweils (Indegree – *M*) / *SD*	Mädchen mit SFB und ältere Kinder (10-12) mit SFB stärker zurückgewiesen als Kinder ohne SFB.
Cambra & Silvestre (2003)	Sozialverhalten, Lernen, geistige, sensorische und motorische Behinderungen	10-14	260	Beliebtheit (Indegree) und Zurückweisung, n.s	Kinder mit SFB signifikant weniger beliebt und stärker zurückgewiesen als Kinder ohne SFB
Estell et al. (2008)	Kinder mit hohem Förderbedarf im Bereich Lernen (Lernbehinderung)	8-9	1361	Langzeitstudie über 2 Jahre: Beliebtheit - Zurückweisung: jeweils (Indegree – *M*) / *SD* Freundschaften: Indegree / Anzahl Wähler Cliquen (SCM): Zugehörigkeit und Zentralität Popularität: Indegree / Anzahl Wähler	Kinder mit SFB weniger beliebt über die Zeit (nimmt zu) Freundschaften: Kinder mit SFB haben signifikant weniger als Kinder ohne SFB (stabil) Zugehörigkeit zu Cliquen: kein Unterschied Zentralität in Cliquen: kein Unterschied Popularität: Kinder mit SFB signifikant weniger Nominationen (stabil)
Frostad & Pijl (2007)	Sozialverhalten, Lernen, Kommunikation, geistige, sensorische und motorische Behinderungen	9-13	989	Beliebtheit (Indegree), n.s Freundschaften: gegenseitige Wahlen, n.s Cliquenzugehörigkeit: Mitglied von Clique	Beliebtheit, Freundschaft, Cliquenzugehörigkeit: Kinder mit SFB signifikant tiefere Werte als Kinder ohne SFB
Huber & Wilbert (2012)	mittlerer und hoher Förderbedarf im Bereich Lernen (Lernbehinderung)	7-12	463	Beliebtheit - Zurückweisung: jeweils (Indegree – *M*) / *SD*	Abnahme der Integration mit Höhe des SFB, Kinder mit hohem SFB signifikant stärker zurückgewiesen und weniger beliebt als Kinder ohne und mit mittlerem SFB
Juvonen & Baer (1992)	Kinder mit hohem Förderbedarf im Bereich Lernen (Lernbehinderung)	8-9	245	Beliebtheit - Zurückweisung: jeweils (Indegree – *M*) / *SD* Freundschaften: gegenseitige Wahlen, n.s	Beliebtheit: Mädchen mit SFB signifikant stärker zurückgewiesen Freundschaften: 67% mit SFB haben mind. 1 Freundschaft, keine weiteren Angaben
Pijl & Frostad (2010)	mittlerer und hoher Förderbedarf im Bereich Lernen (Lernbehinderung)	12-13	498	Beliebtheit (Indegree) / mögliche Anzahl Wahlen pro Klasse	Kinder mit SFB signifikant weniger beliebt
Vaughn et al. (1996)	leichter und hoher Förderbedarf im Bereich Lernen (Lernbehinderung)	7-10	64	Langzeitstudie über 1 Jahr: Beliebtheit - Zurückweisung: jeweils (Indegree – *M*) / *SD* Freundschaften: gegenseitige Wahlen, n.s	Beliebtheit: Kinder mit SFB signifikant weniger beliebt (stabil) Freundschaften: starke Zunahme über die Zeit bei Kindern mit SFB, bei t2 gleich viele Freunde wie Kinder ohne SFB
Yude et al. (1998)	motorische Behinderungen	9-10	55	Beliebtheit - Zurückweisung: jeweils (Indegree – *M*) / *SD* Freundschaften: gegenseitige Wahlen, n.s	Kinder mit SFB signifikant weniger beliebt und stärker zurückgewiesen, Freundschaften: Kinder mit SFB haben signifikant weniger

Tabelle 2

Korrelationstabelle

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Geschlecht									
2. Alter	-.01								
3. Simpson Index	-.06	-.26***							
4. leichter SFB	-.05	-.06	.16***						
5. mittlerer SFB	-.01	.01	.27***	-.07					
6. hoher SFB	.00	.21***	.10*	-.03	-.04				
7. Angabe Lehrperson	.03	.10*	-.12**	-.13**	-.12*	-.18***			
8. Indegree (Mass 1)	.00	.02	.00	-.13**	-.14**	-.07	.30***		
9. Freundschaften (Mass 2)	-.10*	.23***	.23***	.03	.01	.03	.12*	.21***	
10. Zentralität in Cliquen (Mass 3)	.15**	-.01	-.05	-.09†	-.17***	.00	.21***	.36***	.20***

Anmerkung. † = .1 * = $p < .05$, ** = $p < .01$, *** = $p > .001$, zweiseitig, $n = 438$.

Tabelle 3

Hierarchisches lineares Modell (1314 Messungen an 438 Kindern in 20 Schulklassen). Untersucht wird die soziale Inklusion der Kinder in Abhängigkeit des SFB (keinen / leicht / mittel / hoch) und der Art des verwendeten sozialen Integrationsmasses (Beliebtheit, Freundschaften, Zentralität in Cliquen), wobei für das Geschlecht und das Alter kontrolliert wird. Auch die Heterogenität der Schulklasse wurde als Prädiktorvariable ins Modell mit aufgenommen. Die Konstante repräsentiert die mit dem Mass Freundschaften vorhergesagte Inklusion für Mädchen mit durchschnittlichem Alter, die keinen SFB haben. Alle anderen Werte sind als die erwarteten Veränderungen dieser Konstante unter der jeweiligen Bedingung zu interpretieren

	γ (SE)
Konstante	-0.20 (0.11)†
Geschlecht = Junge	-0.00 (0.06)
Alter (am Mittelwert zentriert)	0.12 (0.04)***
Heterogenität der Schulklasse	1.05 (0.37)**
Leichter SFB	0.00 (0.21)
Mittlerer SFB	-0.12 (0.17)
Hoher SFB	-0.19 (0.35)
Beliebtheit	0.11 (0.06)†
Zentralität in Cliquen (ZC)	0.10 (0.06)
Beliebtheit × leichter SFB	-0.76 (0.25)**
Beliebtheit × mittlerer SFB	-0.60 (0.21)**
Beliebtheit × hoher SFB	-0.84 (0.43)†
ZC × leichter SFB	-0.59 (0.25)*
ZC × mittlerer SFB	-0.69 (0.21)***
ZC × hoher SFB	-0.34 (0.43)
AIC	3636.37
BIC	3729.62
$R^2_{GLMM(m)}$	.07

Anmerkung. Die Masse 1-3 und soziale Inklusion sind Z-transformiert.

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$, zweiseitig.

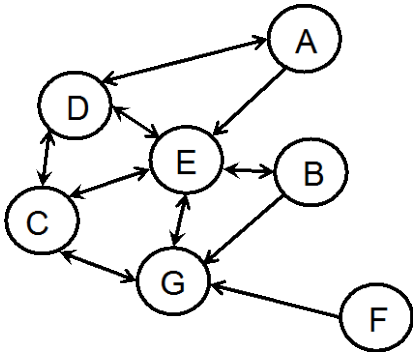


Abbildung 1. Beispiel eines sozialen Netzwerkes mit sieben Kindern (A bis G). Die Pfeile stehen für die Wahlen der Kinder, wobei Pfeile mit zwei Pfeilspitzen gegenseitige Wahlen der Kinder darstellen.

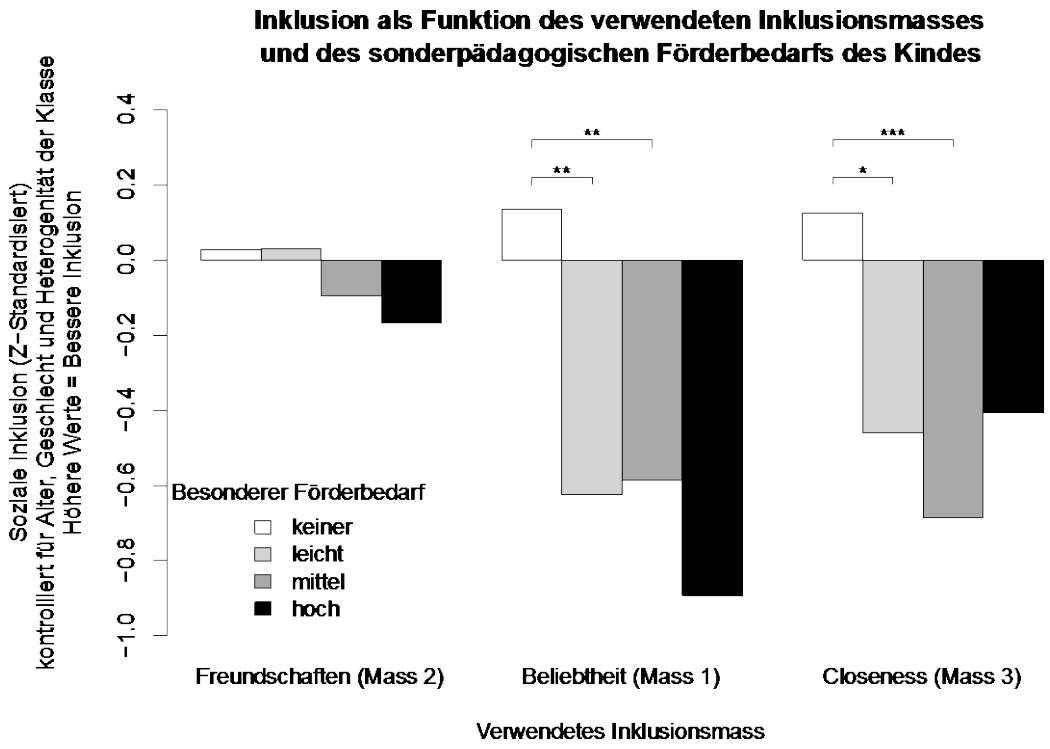


Abbildung 2. Die soziale Inklusion von Kindern in Abhängigkeit der Intensität des SFB (keinen / leicht / mittel / hoch) und des verwendeten soziometrischen Masses (Beliebtheit (Mass 1), Freundschaften (Mass 2), Zentralität in Cliquen (Mass 3)) (* $p < .05$, ** $p < .01$, *** $p < .001$)

7 Chapter 2: The Role of Cross-Group Friendship and Emotions in Adolescents' Attitudes Towards Inclusion

The reference to the final published version is:

Grütter, J., Gasser, L., & Malti, T. (2017). The role of cross-group friendship and emotions in social exclusion. *Journal of Research in Developmental Disabilities, 62*, 137-147. *doi:* 10.1016/j.ridd.2017.01.004

The Role of Cross-Group Friendship and Emotions in Adolescents' Attitudes Towards Inclusion

Jeanine Grütter[1]

Luciano Gasser[1]

Tina Malti[2]

[1]University of Teacher Education Lucerne, Switzerland
[2]University of Toronto, Canada

Correspondence concerning this article should be addressed to Jeanine Grütter, Institute for Diversity in Education, University of Teacher Education, 6004 Lucerne, Switzerland. Email: jeanine.gruetter@phlu.ch, Phone.: +41(0)412284524

Highlights

Adolescents' attitudes towards the inclusion of students with special educational needs (SEN) depend on:

- cross-group friendships between students with and without SEN
- students' emotions following the social exclusion of a student with SEN
- a combination of friendships and emotions:
  only students with cross-group friendships who anticipate low positive emotions show more inclusive attitudes

Abstract

Background

Most countries have started to educate students with special educational needs (SEN) in mainstream schools, but it remains unclear how inclusive attitudes towards students with SEN can be promoted.

Aims

This study investigated adolescents' friendships and attitudes towards the inclusion of students with SEN. We also studied the role of adolescents' emotions regarding the hypothetical social exclusion of a student with SEN for adolescents' inclusive attitudes.

Methods

Adolescents' inclusive attitudes and their emotions were gathered from survey data of 1225 Swiss students aged 11-13. Social network data were collected to assess adolescents' friendship relationships.

Results

The results indicated that adolescents' closeness in cross-group friendship was positively related to their inclusive attitudes. However, this was only true for adolescents who anticipated low positive emotions in the hypothetical exclusion of students with SEN.

Implications

These findings are discussed in relation to consequences of cross-group friendship on adolescents' attitudes towards the inclusion of peers with SEN, as well as the role of intergroup emotions in this process.

Keywords: Cross-group friendship, emotions, special educational needs, attitudes towards inclusion

What this Paper Adds

Students with SEN are often targets of social exclusion in inclusive classrooms. In order to gain an understanding of how social exclusion may be prevented, it is important to study adolescents' attitudes towards including peers with SEN. Furthermore, adolescents' emotions following the exclusion of a student with SEN reflect their socio-moral experiences and highlight how they consider aspects of fairness and aspects of group functioning when deciding whom to include in peer activities.

Prior research has revealed strong evidence in favor of intergroup contacts (i.e. contacts between children from different social groups) and highlighted the role of cross-group friendships. However, most of this research has been done with students from different ethnicities. Little is known whether friendships between students with and without SEN relate to adolescents' inclusive attitudes.

This study adds to the previous literature in demonstrating that friendships between students with and without SEN may go along with more inclusive attitudes, but only when adolescents anticipate less positive and more negative emotions following social exclusion. In short, our findings suggest that positive outcomes of cross-group friendships in inclusive schools depend on adolescents' socio-emotional experiences.

7.1 Introduction

During early adolescence, peer group attitudes and peer conformity are highly salient (Adler & Adler, 1998). This strong need for group affiliation may enhance the social exclusion of minority group members because adolescents may conform to exclusive peer group norms (Killen & Rutland, 2011). To prevent social exclusion, prior research has highlighted the role of intergroup contact between students from different social groups (e.g., Tropp & Prenovost, 2008). Specifically, cross-group friendships may be associated with the strongest positive effects on intergroup attitudes, as friendships represent high-quality contacts (Pettigrew & Tropp, 2006). Although the evidence regarding intergroup contact and its positive consequences on intergroup attitudes is well documented (e.g., Pettigrew & Tropp, 2006), little work has been done to investigate if intergroup contact is associated with measures of social distance (Bastian, Lusher, & Ata, 2012). In other words, it remains unclear if intergroup contact relates to more positive attitudes towards the inclusion of minority group members.

Beside cross-group friendship, students' inclusive attitudes may also depend on adolescents' emotions following the exclusion of a minority group member. These emotions represent aspects of adolescents' socio-moral experiences during intergroup conflict and highlight which aspects of a given situation are important to them (e.g., conventional concerns, such as peer group functioning, vs. moral norms, such as fairness considerations) (Killen & Malti, 2015). Although prior studies have examined adolescents' emotions about social exclusion (e.g., Malti, Killen, & Gasser, 2012), scholars have not yet considered how individual differences in these emotions relate to adolescents' inclusive attitudes.

We addressed these two research gaps by first, examining whether adolescents with cross-group friends would be more positive towards including hypothetical minority group members into social activities. Second, we studied if individuals who reported negative emotions (e.g., feeling sad) when a hypothetical minority group member was excluded would have more inclusive attitudes.

We investigated cross-group friendships between majority group students without special educational needs (SEN) and minority group students with SEN. SEN refer to students with academic difficulties who need additional assistance to visit the same grade as their typically developing peers (Powell, 2006). In the Swiss education system, where this study was conducted, the term SEN is reserved for students who receive additional assistance from a teacher with particular skills in dealing with SEN. This additional support is based on comprehensive interdisciplinary assessments of students' capacities relative to their age

group. Therefore, students with SEN must have a lower academic achievement in comparison with their classmates.

As most countries have started to educate students with SEN in mainstream schools, professionals working in education need to gain a better understanding of the dynamics that underlie the social exclusion of students with SEN.

7.1.1 Social Exclusion of Students with SEN

Previous research on peer relationships of students with SEN in inclusive classrooms suggests that they are perceived as less popular and are less included in peer groups compared to students without SEN (e.g., Estell et al., 2008; Grütter, Meyer, & Glenz, 2015). In order to prevent and reduce the social exclusion of students with SEN, researchers have highlighted the importance of inclusive attitudes of students without SEN (Bates, McCafferty, Quayle, & McKenzie, 2015). Therefore, scholars have studied typically developing adolescents' social contacts with SEN students. Findings from these studies have been mixed: While some studies found that these contacts relate to more positive attitudes in students without SEN (e.g., Armstrong, Morris, Abraham, Ukoumunne, & Tarrant, 2016; Grütter & Meyer, 2014; Laws & Kelly, 2005; Maras & Brown, 1996), other studies have not found any significant differences between individuals who had contacts with SEN peers and individuals without such contacts (e.g., Hastings & Graham, 1995; Nabors, 1997). This inconsistent evidence does not allow for any clear conclusions regarding the effects of inclusive schooling on the attitudes of adolescents' without SEN.

Prior studies have also investigated adolescents' intended behavior to interact with hypothetical SEN students, showing that stories about friendships between students with and without students having SEN led to an increased desire to interact with SEN children (e.g. Cameron & Rutland, 2006; Cameron, Rutland, & Brown, 2007). We extended these studies and compared adolescents' intended behavior to include hypothetical students *with* SEN with their intended behavior to include hypothetical students *without* SEN. The reason for this comparison is based on the idea that social exclusion often results from a process of in-group preference (Abrams & Killen, 2014). Accordingly, individuals enhance their social identities by ascribing their in-group (i.e., the social group they belong to) more positive attributes compared to out-groups (Tajfel & Turner, 1979). As a result of this comparison, out-group members may become excluded (Abrams & Killen, 2014). Therefore, information about both – attitudes regarding the inclusion of in-group members (i.e. students without SEN) as well as attitudes regarding the inclusion of out-group members (i.e. students with SEN) allow for examining social exclusion due to in-group bias.

7.1.2 Cross-Group Friendship and Attitudes Towards the Inclusion of Students with SEN

Cross-group friendship is seen as the most effective strategy in changing intergroup attitudes (Tropp & Prenovost, 2008). The process of disclosure and reciprocal understanding that typically characterizes friendship relations elicits positive feelings that can transfer from the individual involved to his or her entire social group (Pettigrew & Tropp, 2008). Feelings of closeness have been shown to be indicators of friendship quality: With higher levels of closeness, the friend is treated as part of oneself (Davies, Wright, Aron, & Comeau, 2013); thereby the friend's social identity is treated as one's own to some extent, leading to a broadened view of the in-group (Pettigrew & Tropp, 2006). Research indicates that high levels of closeness in cross-group friendship predict more positive attitudes towards the out-group (Chen & Graham, 2015; Page-Gould, Mendoza-Denton, Alegre, & Siy, 2010). During early adolescence, friendship relationships become more stable and characterized by closeness (Cairns, Leung, Gest, & Cairns, 1995); as a consequence, the potential positive consequences of adolescents' cross-group friendships might become more strongly associated with their inclusive attitudes.

From another, more conflicting perspective, early adolescents in Switzerland are about to graduate from elementary to secondary school, whereby they are classified into different grade levels based on their academic achievement; therefore, early adolescents are under a high pressure to perform. As a consequence, students' cognitive capacities become an increasingly salient aspect in adolescents' perception of their peers (Hughes, Zhang, & Hill, 2006); they are sensitive towards teacher norms that might favor academically skilled students compared to less skilled students. Thus, academic achievement might become an additional important social category for social exclusion during early adolescence (e.g., Chen, Chang, & He, 2003). Consequently, the relationship between cross-group friendship and inclusive attitudes might not be clear-cut and depend on how adolescents without SEN weigh different aspects of inclusive norms versus social-conventional norms (e.g., effective academic group functioning). For example, they might prefer to be in a group with other well performing students rather than being inclusive with less advantaged classmates. How adolescents balance these different norms is reflected in their emotions following the exclusion of SEN students (Killen & Malti, 2015).

7.1.3 Adolescent's Emotions Following Social Exclusion

Adolescents' emotions following social exclusion have been conceptualized as "emotion attributions" and measure the emotions that adolescents' would feel after they had excluded a peer from a minority group (Killen & Malti, 2015). To assess these emotions, adolescents are typically confronted with hypothetical scenarios where a minority group member is excluded. Adolescents are then asked to anticipate their own emotions if they had excluded this individual (Killen & Malti, 2015); they usually report a wide range of positive and negative emotions (Malti et al., 2012). This coexistence of different emotions may reflect conflicting motivations: Adolescents may experience negative emotions as they consider the negative consequences for the excluded individual (e.g., "X would feel bad, if he was left out."). In comparison, they may experience positive emotions because they want to prevent their group from possible impairments (e.g., " It would be less effective for the group to work with X")(Killen & Malti, 2015; Malti et al., 2012). Emotions following social exclusion provide information about how adolescents balance these different motivations regarding aspects of fairness versus aspects of group functioning. In this way, adolescents' emotions reflect individual differences in their dispositions to prioritize moral concerns over non-moral concerns (Malti & Krettenauer, 2013).

To date, only few studies have investigated emotions in the context of exclusion of individuals with SEN. In a recent study, it was shown that early adolescents were more likely than younger children to expect negative emotions, such as sadness and guilt, after hypothetically excluding a minority group member (Gasser, Malti, & Buholzer, 2014). Furthermore, adolescents who attributed more negative emotions showed higher levels of peer-reported inclusive behavior (Chilver-Stainer, Gasser, & Perrig-Chiello, 2014). In line with this previous research, we investigated if adolescents' emotions following social exclusion related to their inclusive attitudes. Additionally, students' emotions following exclusion might be associated with intergroup contact: For instance, previous research indicates that adolescents who reported having frequent contact with persons with disabilities were more likely to sympathize with excluded hypothetical peers with disabilities (Gasser, Malti, & Buholzer, 2013). We extended this previous research by examining the role of emotions in the relation between adolescents' cross-group friendships and their inclusive attitudes.

7.1.4 The Role of Adolescents' Emotions Following Social Exclusion in Cross-Group Friendship and Attitudes Towards Inclusion

Even though early adolescents are more likely to anticipate negative emotions after hypothetically excluding a minority group member, they also become more sensitive to group functioning. For example, in a recent study, early adolescents were more likely to report more positive emotions than younger children in situations, where the inclusion of the student with SEN stood in conflict with effective group functioning (Gasser et al., 2014). Regarding inclusive classrooms, positive emotions may reflect adolescents' focus on effective group functioning; depending on how important they consider group performance, adolescents may feel positive after excluding a classmate with SEN. As these positive emotions may impede any positive effects of cross-group friendships, we examined the role of these positive emotions in the relationship between adolescents' cross-group friendship and their inclusive attitudes.

7.1.5 The current study

In sum, this study focused on cross-group friendships between students with and without SEN, and how these friendships relate to inclusive attitudes towards students with SEN. First, we hypothesized that the closeness of cross-group friendship would be associated with more positive attitudes towards the inclusion of hypothetical students with SEN. Second, we assumed a positive relation between emotions following hypothetical exclusion and adolescents' inclusive attitudes; and third, we investigated if emotions following hypothetical exclusion would moderate the relation of cross-group friendship and adolescents' inclusive attitudes. We expected a stronger positive association between cross-group friendship and adolescents' attitudes, when adolescents anticipated less positive emotions for themselves after they had hypothetically excluded a peer with SEN; conversely, we assumed that positive effects from cross-group friendship would not result, if adolescents would anticipate a high intensity of positive emotions. This assumption was based on the idea that adolescents' emotions regarding social exclusion reflect which aspects of a given situation are important to them (e.g., group functioning vs. fairness) (Killen & Malti, 2015). As the students in this study were aware of the importance of their academic achievement for their transfer into secondary school, they could have had a higher focus on academic group functioning. Therefore, adolescents might have reported positive feelings after excluding a classmate with SEN, depending on how important they regarded group performance. We assumed that these

adolescents would not benefit from cross-group friendship (i.e. intending to be more inclusive) because they would feel positive about improving their group performance.

7.2 Method

A small pilot study was conducted in preparation of the main study in order to investigate if learning differences were salient features of adolescents' perceptions of differences in inclusive classroom (i.e., at least one student received support from an SEN teacher). In this pilot, 58 students from four school classes (71% girls) in grades 5-6 (ages 11-13, M_{age} = 12.39 years, SD = 0.62) participated. We elicited students' perceptions of differences with the following instruction: "Students can be different from each other. Two individuals can be different from each other on many different attributes. What differences do you perceive in your classroom?" Participants listed as many differences as came to their mind.

Next, a qualitative content analysis (e.g., Graneheim & Lundman, 2004) was used. In a first step, all diversity attributes were transcribed. In a second step, we identified meaning units that described differences between students, and in a third step, these meaning units were abstracted as codes and labeled. After several readings, eight categories were identified as further abstraction of the codes. These categories were: Appearance, personality, social competencies, status, learning differences, sex, age, and ethnicity. Two researchers independently coded the responses and achieved a mean Kappa of .96.

Some of the statements were as follows: "We have very smart children in our classroom, but also students who need additional time to understand certain things", "There are some children who are slow learners and some who are fast learners". Based on these findings, we concluded that students' ability to learn is a salient feature for adolescents in inclusive classrooms; therefore, in the context of inclusive education, learning differences may serve as a criteria to categorize students into different social groups (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987); thereby, adolescents with SEN may be perceived as out-group members by the majority group of students without SEN. As academic achievement represents an important norm in educational contexts**,** this classification in turn may lead to negative consequences for students with SEN, such as their exclusion from peer activities.

7.2.1 Participants

Participants were 1225 adolescents (50% girls) in grades 5-6 (ages 11-13, M_{age} = 11.57 years, SD = 0.57) from 70 school classes of 55 public schools in Switzerland. As this study focused on friendships between students with and without SEN, we were interested in

adolescents that attended inclusive school classes (i.e., at least one student received support from an SEN teacher). Parents' educational level was estimated based on governmental data about the school community where the adolescents lived in. On average, 24% completed obligatory school, 50% completed a post-secondary diploma and 20% achieved a bachelor's degree or higher. Among the adolescent participants, 38% were of non-Swiss nationality (Germany: 39%, Albania: 28%, Serbia/Croatia: 18% and other nationalities: 15%).

Twenty-three percent of participants were classified as having SEN. We obtained this information from class teachers. SEN reflected that a student received more than one additional lesson per week from an SEN teacher. In line with the concept of inclusion that focuses on including every student regardless of his or her special needs (Lindsay, 2007), we did not differentiate between types or levels of SEN. We assumed that the additional help of the SEN teacher would be sufficient for the classmates to perceive the special needs of a student. As the results of the qualitative pre-study suggest, students are sensitive in their perception of learning differences. To validate our SEN criteria, teachers' perceptions of their students' academic achievement were assessed by three items from Hughes, Dyer, Luo and Kwok (2009) (e.g., "Performing academically at grade level"), which were responded on a five-point response scale (almost always - almost never). Students with SEN (M = 2.85, SD = 1.05) received significantly lower scores than students without SEN (M = 4.31, SD = 0.82), $t(1437.89) = -109.29$, $p < .001$, $d = -4.65$[4]. A more detailed description of the SEN subsample is given in Table 1. As the percentage of students with a migration background was higher in the SEN sample, we controlled for migration background in subsequent analyses.

In order to analyze our research question concerning the inclusive attitudes of the majority group students without SEN, we removed the adolescents with SEN from the statistical analyses. However, as we employed a reciprocal friendship measure (see subsection 7.2.3), we also required the information regarding friendship from students with SEN in order to compute this measure. For this reason, SEN students were included in the sample description. However, the final sample size for the analysis included n = 945 students, all of them without SEN.

7.2.2 Procedure

Students completed a survey that contained all the measures during 15-20 minutes. Five trained research assistants guided the students through the study. Meanwhile, class teachers filled in a questionnaire on their students' educational needs and their academic performance.

[4] In order to correct for the lack of equality of variance, the Welch's t-test was used for this comparison (Ruxton, 2006).

After completing the survey, adolescents were briefed shortly, thanked, and dismissed. Written information was provided for parents, and their informed consent was obtained. Only 1% of the parents did not give their consent. In addition, oral assent of adolescents was requested prior to commencement of the study, and they were able to cease the study at any point.

7.2.3 Measures

Attitudes towards the inclusion of students with SEN. Students read two short descriptions about hypothetical adolescents from another school class. The first student was described in terms of SEN (*a.* "This student needs a lot of time and support to do class work"). The second individual was described as conforming to conceptions of socially desired behavior during class (*b.* "This student is fast in doing class work and asks interesting questions") (citation withheld for blind review). Subsequently, adolescents rated on a four-point Likert-scale (not at all, very much) how willingly they would include these adolescents into three different social activities (i.e., birthday party, play, shared break time; e.g. "How much would you like to invite this adolescent to your birthday party?") (for similar scales see Cameron & Rutland, 2006; Cameron et al., 2007). The order in which these two descriptions were presented was randomized. From the two ratings, difference scores were created; these scores reflected adolescents' attitudes towards the inclusion of students with SEN compared to students from the majority group without SEN. The total difference in the ratings between student *a* and student *b* thus represented adolescents' inclusive attitudes ($\alpha = .83$, $M = 0.04$, $SD = 2.25$).

Cross-group friendship. Cross-group friendships between adolescents with and without SEN were operationalized as mutual relationships in their social networks. Specifically, adolescents were asked to list their best friends from their classroom. To enhance reliability, the number of choices was unlimited (Knoke & Yang, 2008). Additionally, for each classmate that was nominated, students rated the closeness of their friendship with this respective peer on a 3-point Likert-scale (not very close, very close).
Based on these choices, social networks were constructed for each classroom in the statistical environment R (R Development Core Team, 2013). From these networks, reciprocated friendships with SEN adolescents (i.e., both adolescents nominated each other as friends) were obtained (citation withheld for blind review). The number of students without SEN with cross-group friends was 42% ($n = 400$, range: 1-5 cross-group friends). As friendship is defined as mutual relationship (Bukowski, Motzoi, & Meyer, 2009), we did not consider unilateral friendship nominations. In order to consider the transactional nature of friendship

and to create a measure for mutuality in affection (Bukowski et al., 2009), closeness ratings of both parties were added together over each friendship. If an adolescent had multiple cross-group friends, the scores were averaged over these friendships, such that higher values indicated higher average friendship closeness. The idea behind averaging the closeness scores over the number of friends was our primary focus on friendship closeness while accounting for friendship as a limited resource. A score of 0 meant that the adolescent had no cross-group friends (average friendship closeness: $M = 1.90$, $SD = 2.37$, range = 0-6).

Emotions following social exclusion. This measure consisted of a hypothetical social exclusion dilemma (citation withheld for blind review) that described an adolescent with his/her friend who was looking for a third member to resolve a complex math task. In this story, the protagonist excluded the student with SEN from the group activity. Participants were then asked to take the perspective of the excluder and to rate the intensity of five different emotions (i.e., pride, happiness, shame, guilt, sadness) on a 4-point Likert-scale (not at all, very intense). As the emotions following exclusion were highly inter-correlated (range: $r = -.19 – .61$, $p < .001$; $r_{mean} = 0.37$), an overall score was calculated dividing the average of positive emotions (happiness & pride) over the total of emotions (happiness, pride, shame, guilt, and anger). From a conceptual point of view, this was done to acknowledge that multiple emotions can be experienced simultaneously (Arsenio, 2014). The mean level of positive emotions following exclusion was $M = 0.54$ ($SD = 0.16$).

7.2.4 Data Analytic Approach

Before testing our hypotheses, we had to consider between-group variance because the participants were part of different school classes (Bliese, 2000). Therefore, we first tested if adolescents' inclusive attitudes depended on their school class membership. The *ICC(1)* value, which denotes the proportion of overall variance that is explained by school class membership, was .02 (*ICC(2)* = 0.18). Therefore, adolescents' association with their school class explained only 2% of the variance in their inclusive attitudes. As the variance of the intercept was not significantly larger than zero, $F(69, 867) = 1.22$, $p = .12$, the hierarchical structure of the data was not considered in subsequent analyses. To test our hypotheses, we used hierarchical multiple linear regression analysis. To prevent multicollinearity, all variables were mean-centered prior to the analyses (Aiken & West, 1991).

7.3 Results

7.3.1 Descriptive Analyses

Correlations for all study variables are provided in Table 2. Descriptive analyses revealed that – compared to girls – boys had less inclusive attitudes, $t(1027.29) = -5.94$, $p < .001$, $d = -0.27$; reported higher average closeness in cross-group friendship, $t(1028.11) = 17.89$, $p < .001$, $d = 0.82$; and higher positive emotion attributions, $t(1150.06) = 2.84$, $p = .005$, $d = 0.13$. In addition, adolescents with a migration background showed less inclusive attitudes, $t(1000.95) = -2.51$, $p = .01$, $d = -0.12$, higher cross-group friendship closeness, $t(1003.84) = 21.32$, $p < .001$, $d = 0.98$, and higher positive emotion attributions, $t(1224.63) = 20.88$, $p < .001$, $d = 0.95$ – compared to adolescents without migration background[5]. To control for these differences, sex and migration background were included in subsequent analyses.

7.3.2 Cross-Group Friendship and Adolescents' Attitudes Towards the Inclusion of Students with SEN

To test the first hypothesis regarding adolescents' closeness in cross-group friendship and their inclusive attitudes, we regressed adolescents' inclusive attitudes on friendship closeness. The findings are presented in Table 3 (Step 1). In line with our directional hypothesis that the closeness in cross-group friendship would be positively associated with adolescents' inclusive attitudes, the results showed a positive association[6] between closeness in cross-group friendship and inclusive attitudes towards students with SEN. In other words, the closer adolescents felt with their cross-group friends, the more positive they were about including SEN students in their social activities.

7.3.3 Emotions Following Social Exclusion and Adolescents' Attitudes Towards the Inclusion of Students with SEN

Next, we tested if adolescents who anticipated stronger positive emotions for themselves after hypothetically excluding an individual with SEN would report less positive attitudes towards the inclusion of SEN students (hypothesis 2). The analysis (see Step 1, Table 3) revealed a significant main effect that was in line with this assumption.

[5] In order to correct for the lack of equality of variance, the Welch's t-test was used for this comparison (Ruxton, 2006).

[6] As we specified a directional hypothesis (i.e., that adolescents with close cross-group friends would have more inclusive attitudes than adolescents without cross-group friends), we used one-tailed hypothesis testing for this specific hypothesis (Cho & Abe, 2013).

7.3.4 The Moderating Role of Emotions in the Relation Between Cross-Group Friendship and Inclusive Attitudes

In a next step, we tested our third assumption that emotions following the social exclusion of students with SEN would moderate the relation between closeness in cross-group friendship and inclusive attitudes. Therefore, the interaction of cross-group friendship and emotions was added to the previous regression model. The results are displayed in Table 3 (Step 2). In line with our expectations, there was a significant interaction between closeness in cross-group friendship and emotions on inclusive attitudes. To test if the model including this interaction explained significantly more variance than the model only containing the main effects, we compared these two models using an analysis of variance (Baron & Kenny, 1986); the later model explained significantly more variance, F (1, 859) = 3.90, p =.049. Figure 1 displays the interaction effect plotted following the procedure of Aiken and West (1991) in the statistical environment R. Simple slopes tests revealed that adolescents' closeness in cross-group friendship was significantly related to positive attitudes towards the inclusion of hypothetical SEN students – but only under the condition that adolescents anticipated a low intensity of positive emotions for themselves after hypothetically excluding a SEN peer (simple slope b = 0.12, t = 2.70, p = .007). In contrast, when adolescents reported a high intensity of positive emotions, their friendship closeness was not significantly related to their inclusive attitudes (simple slope b = -0.01, t = -0.07, p = .95).

7.4 Discussion

This study focused on friendships among students with and without special educational needs (SEN) and adolescent's emotions following social exclusion. We investigated if such friendships and emotions were related to more inclusive attitudes towards SEN students in adolescents without SEN.

In corroboration with previous research (e.g., Chen & Graham, 2015), we found that adolescents' friendship closeness with SEN students was positively related to their attitudes towards the inclusion of students with SEN. Extending this previous research, this is the first study that not only assessed mutual friendship choices, but also considered the closeness ratings of both: Majority group students without SEN *and* minority group students with SEN. This finding demonstrates that cross-group friendship may increase majority group members' inclusive attitudes towards minority groups – even during the sensitive period of adolescence, a time when peer pressure and peer group identity are at their peak. In short, our findings indicate that cross-group friendship can enhance positive intergroup attitudes before they

become more deeply entrenched in adulthood (Rutland & Killen, 2015). This plasticity of intergroup attitudes due to cross-group friendship may be linked to adolescents' increasing ability to include others into their self-concept. For example, central characteristics of the friendship, such as positive emotions and feelings of trust and closeness, may transfer to the social group of the out-group friend (Aron, Aron, & Smollan, 1992). As a result, individuals with cross-group friends may have more positive expectations about the out-group (Page-Gould et al., 2010). Since adolescents are in a sensitive phase of identity formation (Bronk, 2011), their social identities may be more flexible; as a consequence, adolescents may be more likely to integrate their out-group friends' social characteristics (i.e., attributes related to their social group) into their own self-concept. Furthermore, close friendships in adolescence are characterized by self-disclosure and trust; both characteristics have been identified as important mechanisms of cross-group friendship (Turner, Hewstone, & Voci, 2007).

Concerning the role of adolescents' emotions following the social exclusion of a SEN student, our results indicated that individuals who anticipated less positive emotions following exclusion reported more positive attitudes towards the inclusion of students with SEN. This finding resonates with research on the happy victimizer phenomenon; thereby, high levels of positive emotion expectancies (e.g., happiness) are related to more aggressive behavior and peer victimization (e.g., Malti & Krettenauer, 2013). In contrast, the anticipation of negative emotions is related to socially inclusive behavior (Chilver-Stainer et al., 2014; Gasser et al., 2013).

In addition, the results showed that emotions following social exclusion moderated the relationship between adolescents' cross-group friendship and their inclusive attitudes. This finding was in line with our assumption that adolescents who anticipated more positive emotions would be less likely to benefit from cross-group friendship as opposed to adolescents who expected more negative emotions. Consequently, having a close relationship with a SEN peer was not sufficient to increase adolescents' inclusive attitudes; rather, they needed to anticipate negative emotions when a student with SEN was excluded. The relationship between cross-group friendship and inclusive attitudes became non-significant for individuals who differed more than one standard deviation from the mean level of positive emotions (see Fig. 1). This finding suggests that possible benefits of cross-group friendship depend on individual differences in adolescents' emotions following social exclusion. Even though adolescents with cross-group friends may be more aware of negative consequences for the excluded individual (Gasser et al., 2013), they might still choose to exclude that individual. For example, the inclusion of the individual with SEN could be experienced as a

threat for effective group functioning (as reflected in the anticipation of positively valenced emotions following decisions to exclude a peer). As a result of the academic pressure in upper elementary school, adolescents' might have chosen to be in a well functioning group rather than being inclusive. In addition, group affiliations might have been very influential given the age of the participants (Rubin, Bukowski, & Parker, 2006). Thus, students who are characterized by a strong motivation for group affiliation may be more sensitive regarding aspects of group functioning and favor their in-group over principles of equality. This finding likely reflects the everyday experiences of adolescents in having to weigh aspects of group functioning and fairness in an educational system with conflicting demands: Efficiency and social acceptance.

Despite a number of strengths, this study is not without limitations. First, the findings relied on cross-sectional data. Future longitudinal research needs to determine if adolescents who report more positive attitudes towards the inclusion of students with SEN are also more open for cross-group friendship. Second, while our study is among the first to investigate cross-group friendship using reciprocated friendship measures, another limitation pertained to the small effect sizes of this study. Meta-analyses on intergroup contact have suggested that smaller effect sizes can be expected for field studies compared to experimental designs (Pettigrew & Tropp, 2006); additionally, smaller effect sizes have been shown to result whenever intergroup contact is assessed by asking participants to list all their friends, instead of specifically asking whether they have out-group friends (Davies, Tropp, Aron, Pettigrew, & Wright, 2011). A third limitation is the missing perspective of students with SEN. Prior research has shown that cross-group friendship is more effective for the majority group (Feddes, Noack, & Rutland, 2009). Future research could investigate the quality of cross-group friendship from the perspective of adolescents with SEN.

7.5 Conclusions

In summary, our findings highlight the interplay between cross-group friendship and individual differences with regard to adolescents' anticipation of emotional consequences of exclusion on their attitudes towards the inclusion of peers from minority groups. Specifically, cross-group friendship between adolescents with and without SEN may be associated with more positive attitudes towards the inclusion of SEN peers in individuals who resist group norms and favor norms of equality.

References

Abrams, D., & Killen, M. (2014). Social exclusion of children: Developmental origins of prejudice. *Journal of Social Issues, 70*, 1–11. doi: 10.1111/josi.12043

Adler, P.A., & Adler, P. (1998). *Peer power: Preadolescent culture and identity.* New Brunswick, NJ: Rutgers University Press.

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks: Sage.

Armstrong, M., Morris, C., Abraham, C., Ukoumunne, O. C., Tarrant, M. (2016). Children's contact with people with disabilities and their attitudes towards disability: a cross-sectional study. *Disability and Rehabilitation, 38*, 879–888. doi: 10.3109/ 09638288.2015. 1074727

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology, 63*, 596–612. doi: 10.1037/0022-3514.63.4.596

Arsenio, W. F. (2014). Moral emotion attributions and aggression. In M. Killen and J. G. Smetana (Eds.), *Handbook of Moral Development* (pp. 235–256). New York: Psychology Press.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182. doi: 10.1037/0022-3514.51.6.1173

Bastian, B., Lusher, D., & Ata, A. (2012). Contact, evaluation and social distance: Differentiating majority and minority effects. *International Journal of Intercultural Relations, 36*, 100–107. doi:10.1016/j.ijintrel.2011.02.005

Bates, H., McCafferty, A., Quayle, E., & McKenzie, K. (2015). Review: Typically-developing students' views and experiences of inclusive education. *Disability and Rehabilitation, 37*, 1929–1939. doi:10.3109/09638288.2014.993433

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 349–381). San Francisco: Jossey-Bass.

Bronk, K. C. (2011). Portraits of purpose: The role of purpose in identity formation: A grounded model. *New Directions for Youth Development, 132*, 31–44. doi: 10.1002/yd.426

Bukowski, W., Motzoi, C., & Meyer, F. (2009). Friendship as process, function, and outcome. In K. H. Rubin, W. M. Bukowski, & B. Laursen (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 217–231). New York: Guilford Press.

Cairns, R., Leung, M., Gest, S. D., & Cairns, B. D. (1995). A brief method for assessing social development: Structure, reliability, stability, and developmental validity of the interpersonal competence scale. *Behavioral Research and Therapy, 33*, 725–736. doi: http://dx.doi.org/10.1016/0005-7967(95)00004-H

Cameron, L., & Rutland, A. (2006). Extended contact through story reading in school: Reducing children's prejudice toward the disabled. *Journal of Social Issues, 62*, 469–488. doi: 10.1111/j.1540-4560.2006.00469.x

Cameron, L., Rutland, A., & Brown, R. J. (2007). Promoting children's positive intergroup attitudes towards stigmatized groups: Extended contact and multiple classification skills training. *International Journal of Behavioral Development, 31*, 454–466. doi: 10.1177/0165025407081474

Chen, X., Chang, L., & He, Y. (2003). The peer group as a context: Mediating and moderating effects on relations between academic achievement and social functioning in Chinese children. *Child Development, 74*, 710–727. doi:10.1111/1467-8624.00564

Chen, X., & Graham, S. (2015), Cross-ethnic friendships and intergroup attitudes among Asian American adolescents. *Child Development, 86*, 749–764. doi: 10.1111 /cdev.12339

Chilver-Stainer, C., Gasser, L., & Perrig-Chiello, P. (2014). Children's and adolescents' moral emotion attributions and judgments about exclusion of peers with hearing impairments. *Journal of Moral Education, 43, 3*, 235–249. doi: 10.1080/ 03057240.2014.913515

Cho, H.-C., & Abe, S. (2013). Is two-tailed testing for directional research hypotheses tests legitimate? *Journal of Business Research, 66*, 1261-1266. doi: 10.1016/ j.jbusres.2012.02.023

Davies, K., Tropp, L. R., Aron, A., Pettigrew, T. F., & Wright, S. C. (2011). Cross-group friendships and intergroup attitudes: A meta-analytic review. *Personality and Social Psychology Review, 15*, 332–351. doi: 10.1177/1088868311411103

Davies, K., Wright, S. C., Aron, A., & Comeau, J. (2013). Intergroup contact through friendship: Intimacy and norms. In G. Hodson & M. Hewstone (Eds.), *Advances in intergroup contact* (pp. 200–229). London: Psychology Press.

Estell, D. B., Jones, M. H., Pearl, R., Van Acker, R., Farmer, T., & Rodkin, P. C. (2008). Peer groups, popularity and social preference. Trajectories of social functioning among students with and without learning disabilities. *Journal of Learning Disabilities*, *41*, 5–14. doi: 10.1177/0022219407310993

Feddes, A. R., Noack, P., & Rutland, A. (2009). Direct and extended friendship effects on minority and majority children's interethnic attitudes: A longitudinal study. *Child Development, 80*, 377–390. doi: 10.1111/j.1467-8624.2009.01266.x

Gasser, L., Malti, T., & Buholzer, A. (2013). Children's moral judgments and moral emotions following exclusion of children with disabilities: Relations with inclusive education, age, and contact intensity. *Research in Developmental Disabilities, 34*, 948–958. doi: 10.1016/j.ridd.2012.11.017

Gasser, L., Malti, T., & Buholzer, A. (2014). Swiss children's moral and psychological judgments about inclusion and exclusion of children with disabilities. *Child Development, 85,* 532–548. doi: 10.1111/cdev.12124

Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today, 24*, 105–112. doi: 10.1016/j.nedt.2003.10.001

Grütter, J., & Meyer, B. (2014). Intergroup friendship and children's intentions for social exclusion in integrative classrooms: The moderating role of diversity beliefs. *Journal of Applied Social Psychology, 44*, 481–494. doi: 10.1111/jasp.12240

Grütter, J., Meyer, B., & Glenz, A. (2015). Sozialer Ausschluss in Integrationsklassen: Ansichtssache? [Social exclusion in inclusive classrooms: A question of viewpoint?] *Psychologie in Erziehung und Unterricht, 62*, 65–82. doi:10.2378/peu2015.art05d

Hastings, R. P., & Graham, S. (1995). Adolescents' perceptions of young people with severe learning difficulties: The effects of integration schemes and frequency of contact. *Educational Psychology, 15*, 149–159. doi: 10.1080/0144341950150204

Hughes, J. N., Dyer, N., Luo, W., & Kwok, O. (2009). Effects of peer academic reputation on achievement in academically at-risk elementary students. *Journal of Applied Developmental Psychology, 30*, 182–194. doi: 10.1016/j.appdev.2008.12.008

Hughes**,** J. N.**,** Zhang**,** D., & Hill**,** C. (2006). Peer assessments of normative and individual teacher-student support predict social acceptance and engagement among low-achieving children. *Journal of School Psychology, 43*, 447-463. doi: 10.1016/j.jsp.2005.10.002

Killen, M., & Malti, T. (2015). Moral judgments and emotions in contexts of peer exclusion and victimization. *Advances in Child Development and Behavior, 48*, 249–276. doi:10.1016/bs.acdb.2014.11.007

Killen, M., & Rutland, A. (2011). *Children and social exclusion. Morality, prejudice, and group identity.* New York: Wiley/Blackwell Publishers.

Knoke, D., & Yang, S. (2008). *Social network analysis.* Los Angeles: Sage Publications.

Laws, G., & Kelly, E. (2005). The attitudes and friendship intentions of children in United Kingdom mainstream schools towards peers with physical or intellectual disabilities. *International Journal of Disability, Development and Education*, 52, 79–99. doi: 10.1080/10349120500086298

Lindsay, G. (2007). Educational psychology and the effectiveness of inclusive education /mainstreaming. *British Journal of Educational Psychology, 77*, 1–24. doi: 10.1348/ 000709906X156881

Malti, T., Killen, M., & Gasser, L. (2012). Social judgments and emotion attributes about exclusion in Switzerland. *Child Development, 83*, 697–711. doi: 10.1111/j.1467-8624.2011.01705.x

Malti, T., & Krettenauer, T. (2013). The relation of moral emotion attributions to prosocial and antisocial behavior: A meta-analysis. *Child Development, 84,* 397–412. doi: 10.1111/j.1467-8624.2012.01851.x

Maras, P., & Brown, R. (1996). Effects of contact on children's attitudes toward disability: A longitudinal study. *Journal of Applied Social Psychology, 26*, 2113–2134. doi: 10.1111/j.1559-1816.1996.tb01790.x

Nabors, L. (1997). Playmate preferences of children who are typically developing for their classmates with special needs. *Mental Retardation, 35*, 107–113. doi: 10.1177/105381519902200107

Page-Gould, E., Mendoza-Denton, R., Alegre, J. M., & Siy, J. O. (2010). Understanding the impact of cross-group friendship on interactions with novel out-group members. *Journal of Personality and Social Psychology, 2010, 98*, 775–793. doi: 10.1037/a0017880

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*, 751–783. doi: 10.1037/0022-3514.90.5.751

Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology, 38*, 922–934. doi: 10.1002/ejsp.504

Powell, J. J. W. (2006). Special education and the risk of becoming less educated. *European Societies, 8*, 577-599. doi: 10.1080/14616690601002673

R Development Core Team (2013). *R: A language and environment for statistical computing.* Computer Software. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from http://www.R-project.org

Raabe, T., & Beelmann, A. (2011). Development of ethnic, racial, and national prejudice in childhood and adolescence: A multinational meta-analysis of age differences. *Child Development, 82*, 1715–1737. doi: 10.1111/j.1467-8624.2011.01668.x

Rubin, K. H., Bukowski, W. M., & Parker, J. G. (2006). Peer interactions, relationships, and groups. In N. Eisenberg, W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development, 6th ed.* (pp. 571–645). New York, NY: Wiley & Sons Inc.

Rutland, A., & Killen, M. (2015). A developmental science approach to reducing prejudice and social exclusion: Intergroup processes, social-cognitive development, and moral reasoning. *Social Issues and Policy Review, 9,* 121–154. doi: 10.1111/sipr.12012

Ruxton, G. D. (2006). The unequal variance t-test is an underused alternative to Student's t-test and the Mann–Whitney U test. *Behavioral Ecology, 17*, 688–690. doi: https://dx.doi.org/10.1093%2Fbeheco%2Fark016

Tajfel, H. & Turner, J. C. (1979). An Integrative Theory of Intergroup Conflict. In W. G. Austin & S. Worchel (Eds.), *The Social Psychology of Intergroup Relations* (pp. 33–47). Monterey, CA: Brooks-Cole.

Tropp, L. R., & Prenovost, M. A. (2008). The role of intergroup contact in predicting children's inter-ethnic attitudes: Evidence from meta-analytic and field studies. In S. Levy & M. Killen (Eds.), *Intergroup attitudes and relations in childhood through adulthood* (pp. 236–248). Oxford, England: Oxford University Press.

Turner, R. N., Hewstone, M., & Voci, A. (2007). Reducing explicit and implicit out-group prejudice via direct and extended contact: The mediating role of self-disclosure and intergroup anxiety. *Journal of Personality and Social Psychology, 93*, 369–388. doi: 10.1037/0022-3514.93.3.369

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory.* Oxford: Blackwell.

Appendix

Table 1

Description of subsamples of students with SEN and students without SEN

	Students with SEN	Students without SEN
Sex (girls)	45%	51%
Migration background	50%	34%
Diagnosed ADHD	9%	3%
Diagnosed conduct disorder	9%	2%

Table 2

Correlations of study and control variables

	1.	*2.*	*3.*	*4.*	*5.*
1. Sex (girls = 0)					
2. Age	.07*				
3. Migration background	-.03	.04			
4. Inclusive attitudes	-.08**	.03	-0.05		
5. Friendship closeness	.10**	-.04	0.04	.05	
6. Positive emotions ratio	.09**	.01	0.07*	-.16***	-.01

Note. Positive emotions ratio = intensity of positive emotions / (intensity of positive and negative emotions following social exclusion).

* $p < .05$, ** $p < .01$, *** $p < .001$, two tailed.

Table 3

Multiple regression model predicting adolescents' attitudes towards the inclusion of SEN students by closeness of cross-group friendship, intensity of positive emotions regarding the hypothetical exclusion of a student with SEN, and their interaction

	Step 1			Step 2		
	B (*SE*)	*β*	*t*	*B* (*SE*)	*β*	*t*
Sex (girls = 0)	-0.41 (.15)	-.09	-2.70**	-0.40 (0.15)	-.09	-2.60**
Age	0.15 (.14)	.04	1.07	0.15 (0.14)	.04	1.06
Migration background	-0.30 (.18)	-.06	-1.65	-0.31 (0.18)	-.06	-1.69†
Friendship closeness (FC)	0.06 (.03)	.06	1.84†	0.06 (0.03)	.06	1.80†
Positive emotions ratio (PER)	-2.08 (.48)	-.15	-4.38***	-2.05 (0.48)	-.15	-4.32***
FC × PER				-0.38 (0.19)	-.07	-1.97*
Total R^2 (ΔR^2)	.03 (.03)***			.04 (.01)*		
F	7.12 (5, 860)***			6.60 (6, 859)***		

Note. Positive emotions ratio = intensity of positive emotions / (intensity of positive and negative emotions following social exclusion). The variables friendship closeness and positive emotions ratio are mean-centered. Control variables included age, sex and migration background.
† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$, two-tailed.

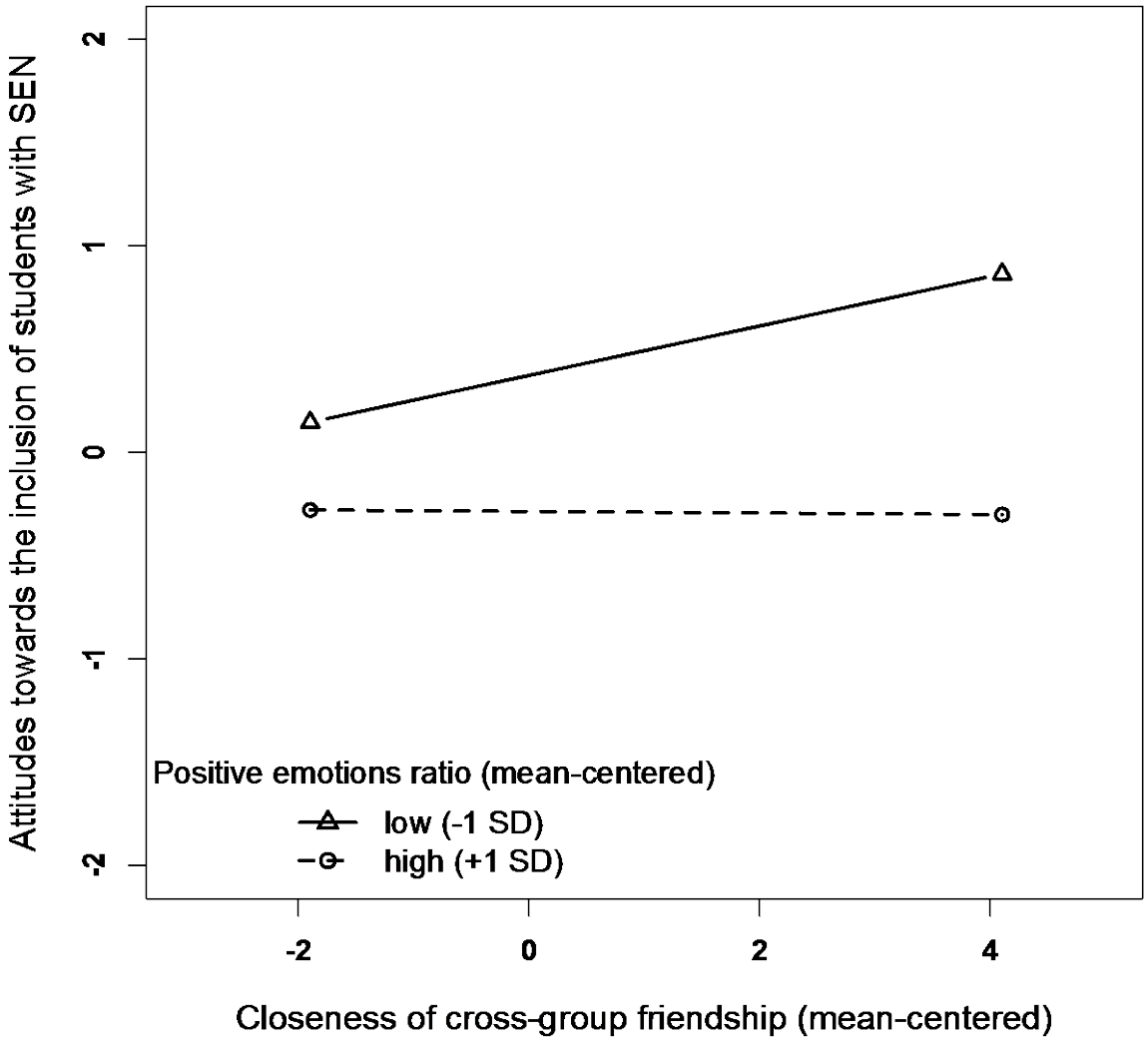


Figure 1. Adolescents' attitudes towards the inclusion of students with special educational needs (SEN) as a function of their closeness in friendships with SEN students and their intensity of positive emotions regarding the hypothetical social exclusion of students with SEN.

8 Chapter 3: Cross-Group Friendship: The Roles of Shared Activities and Mutual Trust for Children's and Adolescents' Intergroup Attitudes

At the time of submission of this dissertation, this manuscript had been submitted to the *British Journal of Developmental Psychology.*

Grütter, J. & Tropp, L. (under review). Cross-group friendships: The roles of shared activities and mutual trust for children and adolescents' intergroup attitudes. *British Journal of Developmental Psychology.*

Note: This publication was submitted in the form of a short report. Short reports in the British Journal of Developmental Psychology are limited to a maximum of 2'000 words, including abstract, references, tables, and figures.

Cross-Group Friendship: The Roles of Shared Activities and Mutual Trust for Children's and Adolescents' Intergroup Attitudes

Jeanine Grütter[1]

Linda R. Tropp[2]

[1]University of Teacher Education Lucerne, Switzerland

[2]University of Massachusetts Amherst, U.S.A.

Acknowledgments: The authors are grateful to the undergraduate students who assisted in the data collection and to all the teachers and students who participated in the study.
Correspondence concerning this article should be addressed to Jeanine Grütter, Institute for Diversity in Education, University of Teacher Education, 6004 Lucerne, Switzerland. Email: jeanine.gruetter@phlu.ch, Phone: +41 228 45 24.

Statement of Contribution

Account of state of research in the field:

1. Cross-ethnic friendships between children can foster the development of positive intergroup attitudes
2. Generally, positive outcomes of friendships may depend on children's developmental stage

What this study adds:

1. We test if certain aspects of cross-ethnic friendships may be more predictive of inclusive attitudes
2. Only friendship characterized by mutual trust predicts more inclusive attitudes toward immigrants
3. There is no age difference in the role of mutual trust for children's and adolescents' inclusive attitudes

Abstract

We examined shared activities and mutual trust as different aspects of cross-group friendship to predict attitudes towards inclusion of immigrant students among Swiss children and adolescents (N = 309). Only mutual trust, but not shared activities, positively predicted inclusive attitudes. We discuss the implications of our findings in relation to developmental research on the antecedents of intergroup attitudes.

Keywords: Cross-group friendship, trust, intergroup attitudes

8.1 Introduction

Greater ethnic diversity in schools can enhance opportunities for social interactions between children from different ethnic backgrounds. Cross-ethnic interactions between children can in turn foster the reduction of prejudice and development of positive intergroup attitudes, especially when these interactions occur in the context of cross-group friendships (e.g., Davies, Tropp, Aron, Pettigrew, & Wright, 2011). However, positive outcomes of intergroup contact – and cross-group friendships in particular - may depend on children's developmental stage.

A recent meta-analysis suggests that intergroup contact is especially likely to predict more positive intergroup attitudes among children in middle and late childhood, while intergroup contact does not moderate intergroup attitudes among adolescents (Raabe & Beelmann, 2011). Still, it remains unclear whether these effects of contact only reflect age differences, or whether they might correspond to different dimensions of contact in which children and adolescents are typically engaged. In light of developmental research showing that friendship can serve different functions in childhood and adolescence (Rubin, Bukowski, & Parker, 2006), we specify more closely the dimensions of cross-group friendships that may uniquely predict intergroup attitudes among children and adolescents.

Most prior studies of cross-group friendships in childhood and adolescence have either focused on a broad age range or on a particular age group, rather than examining how different dimensions of cross-group friendships may predict positive intergroup attitudes at different ages. Some recent work suggests, however, that emotional dimensions of cross-group friendships (e.g., emotional support) may be especially likely to influence intergroup attitudes, as compared to time spent with out-group friends (Chen & Graham, 2015).

We seek to extend this work by incorporating more of the literature on friendship into studies of cross-ethnic relations among children and youth. Prior work has shown that shared interests and common activities often provide the basis for friendship in childhood and early adolescence (Rubin et al., 2006), whereas intimacy and trust gain more importance with the transition to adolescence (Newcomb & Bagwell, 1995).

We examine these issues by first studying how two different aspects of cross-group friendships – shared activities and mutual trust – predict positive intergroup attitudes, which is operationalized here as inclusive attitudes towards immigrants. Second, we investigate whether there are developmental differences in how these two aspects predict inclusive attitudes in late childhood and early adolescence. As friendships become more intimate and characterized by trust (Newcomb & Bagwell, 1995), we expected that mutual trust would be

more strongly related to inclusive attitudes among adolescents compared to among children. In contrast, we expected that there would be a stronger relation between shared activities and inclusive attitudes among children compared to early adolescents.

8.2 Method

8.2.1 Sample and Procedure

Participants were 309 students from 20 school classes in Switzerland. Participants were divided in two age groups: Late childhood (range: 7-9 years, n = 145; M_{age} = 8.39 years; SD = 0.76, 51% girls) and early adolescence (range: 10-13 years, n = 164; M_{age} = 10.65 years; SD = 0.82, 49% girls)[7]. Primary caregivers' informed consent was obtained[8] and participating children were asked for oral assent. Five trained research assistants conducted face-to-face interviews individually with each participating student.

Participating students first answered questions regarding their friendships with classmates and then listened to a story about children from another school class and were asked to imagine being a member of this class. One of the classmates was described as being non-Swiss – that is, knowing another language better and sometimes having trouble understanding Swiss German.

Attitudes toward inclusion of immigrant students. Using a five-point smiley scale, children rated two versions of this hypothetical classmate – one male, and one female in random order – on three items to assess how they felt about interacting with this student in social activities (e.g. "How much would you like to invite this student to your birthday party?", α = .79; adapted from Cameron, Rutland, Brown, & Douch, 2006).

Cross-group friendship. Cross-group friendships were identified from classroom social networks, which were created based on children's friendship choices. Students were asked about two dimensions of friendship: Shared activities ("With whom do you [play/hang out[9]] during break time?") and mutual trust ("With whom do you share your secrets?"). For each question, students chose as many names as they wanted from their class. Based on teacher and student information regarding students' ethnicity, reciprocated friendships

[7] An additional 125 students were of non-Swiss nationality (Eastern Europe: 35%, Southern Europe: 29%, Northern / Western Europe: 23%, Arab / Asian regions: 13%). Immigrant students were not included in the statistical analyses, because they represented many different nationalities, and there were not enough students from any single nationality to conduct analyses comparable to those for Swiss students. Non-Swiss immigrant students are mentioned here because their data were used to calculate mutual cross-group friendships and ethnic classroom diversity.

[8] 2.5% of the parents refused consent and their children were removed from the study.

[9] The term "play" was used for children, and the term "hang out" was used for adolescents.

between Swiss and immigrant students were identified (see Table 1) (Aboud, Mendelson, & Purdy, 2003).

To consider children's opportunities for cross-group friendships, we controlled for classroom diversity. Ethnic classroom diversity was measured using Simpsons' Index (Simpson, 1949), which takes the number of different groups and their numerical representation into account and ranges from 0 (no diversity, all students in the class are Swiss) to 1 (total diversity, all students are from different nationalities).

8.3 Results

Preliminary analyses revealed that class membership explained only 2% of the variance in inclusive attitudes (*ICC(1)* =.02, *ICC(2)* = 0.16) and the variance of the intercept was not significantly larger than zero ($F(19, 280) = 1.19$, $p = .26$). As this precondition for multilevel modeling was not met (Bliese, 2000), we did not further consider the hierarchical structure of the data.

We first tested which aspects of cross-group friendship predicted more inclusive attitudes toward immigrants; thus we regressed inclusive attitudes on mutual trust and shared activities while controlling for age, sex and ethnic classroom diversity. The results revealed that only mutual trust, but not shared activities, significantly predicted more inclusive attitudes (see Table 2, Step 1). We then examined whether age differences moderated relations between the two different aspects of friendship and inclusive attitudes. Contrary to our expectations, the predictive effects of mutual trust and shared activities on inclusive attitudes did not depend on participants' age group (see Table 2, Step 2).

8.4 Discussion

In this research, we examined how two different aspects of cross-group friendships – shared activities and mutual trust – predict inclusive attitudes toward immigrants among Swiss children and adolescents. Our findings highlight the important role of mutual trust for cross-group friendships in both childhood and adolescence. Contrary to our assumption, this study did not reveal any differences in how mutual trust predicts inclusive attitudes between children and early adolescents. Mutual trust in relationships becomes more significant during late childhood and early adolescence, whereby children start to prefer relationships that are characterized by trust (Kahn & Turiel, 1988). Therefore, it could be that for students in late childhood, trust may have already become a more important characteristic of their friendships,

such that the predicted effect may only emerge through comparisons with younger samples of children in early and middle childhood.

Our results further suggest that, while cross-group friendships can significantly predict inclusive attitudes, engaging in shared activities may not be enough to change intergroup attitudes. Rather, cross-group friendships should be characterized by mutual trust in order to predict more inclusive attitudes toward immigrant children. This finding complements recent work showing stronger effects of cross-group friendship on intergroup attitudes when assessed in terms of emotional dimensions of friendship as compared to time spent with cross-group friends (e.g., Chen & Graham, 2015). Moreover, these findings are consistent with the broader literature on intergroup contact and cross-group friendship, which show stronger contact-attitude effects when emotional dimensions of those relationships are examined (e.g., Tropp & Pettigrew, 2005).

Unfortunately, due to our small and highly diverse immigrant sample, we could not meaningfully study the role of cross-group friendships among immigrant children. Given that these children tend to have lower social positions compared to Swiss children (Eckhart, 2005), it would be important to know what characteristics of friendships with Swiss children would facilitate inclusion from their perspective.

Nonetheless, our findings suggest that trusting relationships between diverse groups of students are crucial to promote inclusion during late childhood and early adolescence. Further research attention should be granted to identifying classroom conditions that can facilitate the development of mutual trust between students from different ethnic backgrounds.

References

Aboud, F. E., Mendelson, M. J., & Purdy, K. T. (2003). Cross-race peer relations and friendship quality. *International Journal of Behavioral Development, 27*, 165–173. doi:10.1080/01650250244000164

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 349–381). San Francisco: Jossey-Bass.

Cameron, L., Rutland, A., Brown, R. J., & Douch, R. (2006). Changing children's intergroup attitudes toward refugees: Testing different models of extended contact. *Child Development, 77*, 1208–1219. doi:10.1111/j.1467-8624.2006.00929.x

Chen, X., & Graham, S. (2015). Cross-ethnic friendships and intergroup attitudes among Asian American adolescents. *Child Development, 86*, 749–764. doi:10.1111/cdev.12339

Davies, K., Tropp, L. R., Aron, A., Pettigrew, T. F., & Wright, S. C. (2011). Cross-group friendships and intergroup attitudes: A meta-analytic review. *Personality and Social Psychology Review, 15*, 332–351. doi:10.1177/1088868311411103

Eckhart, M. (2005). *Anerkennung und Ablehnung in Schulklassen. Einstellungen und Beziehungen von Schweizer Kindern und Immigrantenkindern.* [Acceptance and rejection in school classes. Attitudes and relations among Swiss and Immigrant children]. Bern: Haupt.

Kahn, P. H., & Turiel, E. (1988). Children's conceptions of trust in the context of social expectations. *Merrill-Palmer Quarterly, 34*, 403–419.

Newcomb, A. F., & Bagwell, C. L. (1995). Children's friendship relations: A meta-analytic review. *Psychological Bulletin, 117*, 306–347. doi:10.2307/353560

Raabe, T., & Beelmann, A. (2011). Development of ethnic, racial, and national prejudice in childhood and adolescence: A multinational meta-analysis of age differences. *Child Development, 82*, 1715–1737. doi:10.1111/j.1467-8624.2011.01668.x

Rubin, K. H., Bukowski, W. M., & Parker, J. G. (2006). Peer interactions, relationships, and groups. In N. Eisenberg, W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development, 6th ed*. (pp. 571–645). New York, NY: Wiley & Sons Inc.

Simpson, E. H. (1949). Measurement of diversity. *Nature, 163*, 168.

Tropp, L. R., & Pettigrew, T. F. (2005). Relationships between intergroup contact and prejudice among minority and majority groups. *Psychological Science, 16*, 951–957. doi:10.1111/j.1467-9280.2005.01643.x

Table 1

Number of cross-group friends among Swiss students

	Children	Adolescents
	M (SD)	*M (SD)*
Shared play	0.46 (0.67)	0.56 (0.80)
Mutual trust	0.17 (0.41)	0.26 (0.55)

Table 2

Multiple regression model predicting Swiss children's and adolescents' attitudes towards the inclusion of non-Swiss students

	Step 1			Step 2		
	B (*SE*)	*β*	*t*	*B* (*SE*)	*β*	*t*
Sex (girls)	0.07 (0.10)	.04	0.71	0.07 (0.10)	.04	0.71
Age group	0.16 (0.10)	.09	1.57	0.15 (0.10)	.09	1.54
Shared activities	-0.07 (0.08)	-.06	-0.87	-0.33 (0.26)	-.28	-1.25
Mutual trust	0.30 (0.12)	.17	2.47*	0.98 (0.41)	.56	2.37*
Classroom diversity	0.46 (0.41)	.07	1.14	0.49 (0.41)	.07	1.21
Age * activities				0.17 (0.16)	.24	1.05
Age * trust				-0.42 (0.24)	-.42	-1.73
Total R^2 (ΔR^2)	.04 (.03)			.05 (.03)		
F	2.59 (5, 294)*			2.29 (7, 292)*		

The variables activities, trust, and classroom diversity were mean-centered.

* $p < .05$, ** $p < .01$, *** $p < .001$, two-tailed.

9 Chapter 4: Promoting inclusion via cross-group friendship: The role of individual change in trust and sympathy

The reference to the final published version is:

Grütter, J., Gasser, L., Zuffiano, A., & Meyer, B. (2017). Promoting inclusion via cross-group friendship: The role of individual change in trust and sympathy. *Child Development.* doi: 10.1111/cdev.12883

Promoting Inclusion via Cross-group Friendship: The Mediating Role of Change in Trust and Sympathy

Jeanine Grütter[1]

Luciano Gasser[1]

Antonio Zuffianò[2]

Bertolt Meyer[3]

[1]University of Teacher Education Lucerne, Switzerland

[2]Hope University, Liverpool, UK

[3]Chemnitz University of Technology, Germany

Conflict of Interest: The authors declare that they have no conflict of interest.
Acknowledgments: The authors are grateful to the undergraduate students who assisted in the data collection and to all the teachers and students who participated in the study.
Correspondence concerning this article should be addressed to Jeanine Grütter, Institute for Diversity in Education, University of Teacher Education, 6004 Lucerne, Switzerland. Email: jeanine.gruetter@phlu.ch, Phone: +41 228 45 24.

Abstract

To understand the conditions fostering positive outcomes of inclusive schooling, this two-wave study examined the role of individual change in trust and sympathy for adolescents' cross-group friendships and inclusive attitudes towards students with special educational needs. Cross-group friendships were identified with social networks and intergroup trust, sympathy, and inclusive attitudes were obtained from surveys completed by 1128 Swiss adolescents ($M_{age\ T1}$ = 11.55 years, $M_{age\ T2}$ = 12.58 years) from 61 school classes.

Results from a parallel latent change score model revealed that the number of cross-group friendships positively related to individual change in trust and sympathy; this growing trust and sympathy in turn predicted adolescents' inclusive attitudes. These findings are discussed regarding theories of intergroup contact and inclusive schooling.

Keywords: Cross-group friendship, intergroup trust, sympathy, attitudes towards inclusion

9.1 Introduction

With the aim of creating a society that accepts individuals from different social backgrounds and with different developmental requirements, nearly 100 countries signed the Salamanca statement requiring the implementation of policies for inclusive education (United Nations Educational, Scientific and Cultural Organization [UNESCO], 1994). According to the philosophy of inclusive education, diversity among students potentially fosters interactions between individuals who are different from each other. A number of studies show that contacts between students from different social groups can enhance positive attitudes in children and adolescents (Pettigrew & Tropp, 2006; Tropp & Prenovost, 2008). However, this research has primarily focused on students from different ethnicities while only a few studies have investigated students with special educational needs (for exceptions see for example Armstrong, Morris, Abraham, Ukoumunne, & Tarrant, 2016; Cameron & Rutland, 2006; Grütter & Meyer, 2014). Special educational needs (SEN) refer to students who need – due to a slower development of social-emotional or intellectual skills – additional assistance to visit the same grade as their peers (Powell, 2006). Studying contacts between students with and without SEN may allow for an insight into how tolerance and inclusion among students can be promoted.

Regardless of the social category under investigation, the strongest positive effects of intergroup contact result from high-quality contacts, such as friendship (Pettigrew & Tropp, 2006), as it is likely to induce positive emotions and to reduce negative emotions related to the perception of the out-group (Pettigrew & Tropp, 2008; Turner, Hewstone, & Voci,, 2007). Although mechanisms through which friendship affects intergroup attitudes are well documented in adults (e.g., Pettigrew & Tropp, 2008), only few studies have investigated potential mediators between intergroup friendship and intergroup attitudes in children or adolescents (Aboud & Spears Brown, 2013). Of these studies that have tested such mechanisms in children or adolescents, most studies have been cross-sectional (for exceptions see Feddes, Noack, & Rutland, 2009; Munniksma, Verkuyten, Flache, Stark, & Veenstra, 2015; Swart, Hewstone, Turner, & Voci, 2011). However, testing process assumptions with cross-sectional designs does not only have several methodological limitations (see Maxwell, Cole, & Mitchell, 2011), but also disregards the fact that processes need time to unfold (Selig & Preacher, 2009). In addition, “development is most often conceived of as occurring within individuals.” (Selig & Preacher, 2009, p. 146); consequently, assumptions about development require testing individual change.

In the present study, we addressed these research gaps by examining the role of individual change in trust and sympathy for cross-group friendships between early adolescents with and without SEN. In particular, we studied if such friendships would lead to increased trust and sympathy in students without SEN, and whether this individual change in trust and sympathy would predict their inclusive attitudes. In contrast to earlier studies, we specifically studied the role of *change* in trust and sympathy. We focused on these two affective components because affective dimensions of friendships become more salient during early adolescence (Bukowski, Motzoi, & Meyer, 2009; Newcomb & Bagwell, 1995). Moreover, adolescents' affective experiences influence how they understand and encode social situations, whereby higher emotional arousal increases the salience of negative aspects of moral transgressions (Arsenio, Gold, & Adams, 2006). As social exclusion represents a moral transgression, we assumed that individuals who experience an increase in their trust and sympathy would be more inclusive towards students with SEN.

9.1.1 Cross-Group Friendship and Attitudes Towards the Inclusion of Students with SEN

Prior studies on the social participation of pupils with SEN in inclusive classrooms indicate that students with SEN represent likely targets for social exclusion (Bossaert, de Boer, Frostad, Pijl, & Petry, 2015). Students with SEN are less popular and less included in peer groups compared to their classmates without SEN (e.g., Grütter, Meyer, & Glenz, 2015). Additionally, SEN students are more likely to be targets of victimization (Rose, Monda-Amaya, & Espelage, 2011); therefore, in contrast to the idea of creating inclusive societies, the increasing heterogeneity of inclusive school environments might also be a potential risk for social exclusion of students with SEN.

Scholars have argued that social inclusion of students with SEN can be achieved by improving attitudes towards children with SEN among majority group students without SEN (Bates, McCafferty, Quayle, & McKenzie, 2015). Attitudes towards SEN students, and specifically, children with intellectual disabilities or lower academic achievement are negative, as suggested by meta-analytic results (Nowicki & Sandieson, 2002). For example, children use more negative and less positive descriptions for children with learning disabilities than for children without learning disabilities and they show less desire to include these hypothetical children with learning disabilities into peer activities (Nowicki, 2011).

Cross-group friendships have a strong potential to reduce such negative attitudes towards students with SEN (e.g., Grütter & Meyer, 2014) because these friendships are sustained over time, voluntary, include common goals, shared interests, and positive affect

(Pettigrew, 1998). Therefore, in addition to the question *if* cross-group friendships may enhance adolescent's intended inclusion, the more important question is *how* such friendships work. Research on adult samples has provided a theoretical framework for proposing mediators of the link between contact and positive attitudes (Aboud & Spears Brown, 2013). These well-established process variables are social-cognitive variables (e.g., enhanced knowledge about the out-group) and affective variables (i.e., emotions) (Pettigrew & Tropp, 2008).

9.1.2 The Role of Intergroup Emotions in Cross-Group Friendship

Emotions are very powerful mediators of intergroup contact and prejudice; compared to cognitive processes, emotions have revealed the highest effect sizes for the reduction of prejudice in meta-analytic reviews (Pettigrew & Tropp, 2008). In other words, the strongest explanation for positive effects of cross-group friendships is the generation of positive affect (i.e., positive emotions) towards out-group members (Pettigrew, 1998). The emotions that have received most attention in prior research are intergroup anxiety and empathy (Pettigrew & Tropp, 2008). Enhanced empathy may result from the disclosure of personal information and reciprocal understanding that typically characterizes friendship (Pettigrew & Tropp, 2008).

Friendships become more stable, close and intimate during early adolescence; they serve important adaptive functions, such as providing emotional security, validation, support, and feelings of belonging (Bukowski, Motzoi, & Meyer, 2009; Newcomb & Bagwell, 1995). Thus, affective dimensions of friendships become more salient during this period. Specifically, relationships become more characterized by loyalty and confidentiality (Cairns, Leung, Buchanan, & Cairns, 1995; Newcomb & Bagwell, 1995), which reflect important dimensions of trust (Rotenberg, 2010). Besides trust, greater closeness is related to enhanced sympathy (Padilla-Walker, Fraser, Black, & Bean, 2015); thus, closeness in cross-group friendships may promote adolescents' sympathy for out-group members. In this study, we therefore focused on the role of trust and sympathy, as these two affective friendship processes may be of particular importance during early adolescence.

In summary, this study examined if changes in intergroup trust and sympathy would reflect important mechanisms in the promotion of positive intergroup attitudes in early adolescence. Thereby, we specifically focused on the role of *change*, and assumed that increasing levels of trust and sympathy would be predictive of adolescents' inclusive attitudes. This assumption was based on the idea that increasing emotional arousal highlights negative aspects of moral transgressions (Arsenio et al., 2006), and therefore, leads to more

inclusive attitudes. In addition, theories of social salience propose that vivid (i.e., emotionally interesting, proximate, and concrete) experiences attract social attention and are more persuasive in comparison to other information (Fiske & Taylor, 2013). Consequently, we assumed that if individuals experience a change in their emotions, this experience would enhance the salience of their cross-group friendship. As we focused on two positively valenced emotions, we expected that his emotional change would lead to a more positive view of students with SEN and therefore, more inclusive attitudes towards students with SEN. We now briefly discuss each of the two mediators.

Intergroup Trust

Friendship generates interpersonal attraction: With growing intimacy and self-disclosure, the friendship is increasingly characterized by reciprocal trust (Rotenberg, 1986; Turner et al., 2007). Trust is defined as a multi-dimensional construct with three bases: Reliability (i.e., if the person is keeping promises), emotional trust (i.e., not causing emotional harm, being confidential), and honesty (i.e., telling the truth, not being manipulative) (Rotenberg, 2010). Mutual trust becomes more important for relationships during middle childhood (Kahn & Turiel, 1988) and is associated with pro-social behavior (Malti et al., 2016).

Enhanced feelings of trust may also relate to improved intergroup attitudes towards out-group members (Tam, Hewstone, Kenworthy, & Cairns, 2009; Turner et al., 2007). This trust in out-group members is called intergroup trust and is defined as positive expectations about intentions and behaviors of the out-group towards the in-group. In this intergroup context, out-group members are perceived as reliable if they keep promises; they are perceived trustworthy if they do not cause harm to the in-group; and they are perceived as honest if they are telling the truth (Turner et al., 2010). Research on intergroup trust in children and adolescents is scarce; this research suggests that children perceive out-group members as less trustworthy compared to in-group members (Rotenberg & Cerda, 1994).

Nevertheless, cross-group friendship in early adolescents may lead to increased trust in out-group members and results in more positive attitudes about the out-group in general because greater trust in out-group friends may transfer to the entire social group of the out-group friend. If the friend is perceived as trustworthy, it may also imply that the friends' social group can be trusted (Tam et al., 2009; Turner et al., 2007). Prior research on intergroup trust in adolescents has shown that cross-group friendship can elicit positive expectations about out-group members regarding their intentions and their behavior (Turner et al., 2007). Furthermore, intergroup contact between Protestant and Catholic young adults in a

post-conflict area of Northern Ireland was associated with higher intentions to approach out-group members (e.g., Protestants were more likely to approach Catholics); this relationship was mediated by higher trust for the out-group (Tam et al., 2009).

Sympathy

Sympathy is defined as an affective response to others' emotional states and perspectives that is characterized by feelings of concern for another; thereby, sympathy involves the apprehension of the others' emotional state (Eisenberg, Eggum, & Di Giunta, 2010). Unlike empathy, which is defined as an affective response that is similar to the other persons' feelings, sympathy does not necessarily involve feeling the same emotions as the other. As an other-oriented emotion, sympathy shifts the focus from the self to others and thereby enhances perspective taking. A substantial body of research has shown that sympathy is positively related to pro-social behavior (Eisenberg et al., 2010).

Close friendships have the potential to enhance feelings of sympathy; findings from a recent longitudinal study were in line with this reasoning as friendships were positively related with higher sympathy and pro-social behavior (Padilla-Walker et al., 2015). This enhanced sympathy for friends may also transfer to out-group members; in this intergroup context, sympathy has been shown to be an important and highly positive mediator of intergroup contact (Pettigrew & Tropp, 2008). To date, however, studies investigating the role of sympathy or empathy in children or adolescent samples are scarce (e.g., Abbott & Cameron, 2014; Swart et al., 2011; Turner et al., 2007). Results from studies realized with adolescent samples have shown that cross-group friendships lead to an increase in empathy towards out-group members, and thus, result in more positive attitudes about the out-group in general (Abbott & Cameron, 2014; Turner et al., 2007). Regarding students with SEN, a first cross-sectional study by Gasser, Malti and Buholzer (2013) has revealed that children without SEN who reported intergroup contact with a child having SEN also reported more sympathy for hypothetical children with SEN.

9.1.3 The Present Study

This study investigated the mediational effects of changes in trust and sympathy in linking cross-group friendship and attitudes towards the inclusion of students with SEN. We tested our hypothesized mediational model in a longitudinal design with two waves of data. Given our focus on the developmental processes of trust and sympathy, we used latent change score modeling, as this allowed us to model intraindividual and interindividual change in sympathy and trust simulatenously. Specifically, we hypothesized that the number of cross-group friendships would relate to a change in intergroup trust and sympathy over a year and

that this individual change would be associated with higher attitudes towards inclusion after this year.

We focused on students who received additional assistance due to low academic achievement. Achievement is strongly correlated with peer acceptance if academic performance is highly valued (Dijkstra & Gest, 2015). The adolescents in our Swiss sample were about to being transferred into secondary school, whereby they are streamed according to their school grades into different secondary schooling types with different achievement levels; thus adolescents are under a high pressure to perform and academic performance is highly salient.

9.2 Method

9.2.1 Participants and Design

Participants were assessed at two time points before being transferred into secondary school: First, at the end of grade 5 and subsequently one year later, at the end of grade 6. At the first measurement time (T1), participants were 1128 adolescents (50% females) from 61 school classes in Switzerland (ages 10-14, M_{age} = 11.55 years, SD = 0.56). At the second measurement time (T2), there were 941 adolescents (49% females) from 54 school classes (ages 11-15, M_{age} = 12.58 years, SD = 0.56). All the students visited inclusive school settings; thus, at least one student per class received additional support from a teacher with special competencies in dealing with SEN. Eighteen percent of participants were classified as having special educational needs (SEN) due to low academic achievement (more details on how students with SEN were identified are given below).

Written information was provided for parents in the four official languages of Switzerland; this information was also translated into the most frequently spoken foreign languages. Parents' informed consent was obtained, whereby at T1 and at T2 only 1% of the parents refused their consent. Furthermore, oral assent of the adolescents was requested and they were able to withdraw from the study any time. All the participants filled in a questionnaire during 15-20 minutes, whereby five trained research assistants guided them through the study. Meanwhile, class teachers filled in a questionnaire on their students' academic performance. After completing the survey, adolescents and teachers were briefed shortly, thanked, and dismissed.

Parents' educational level was estimated based on governmental data about the school community where the adolescents lived in. At T1, approximately, 24% of the parents completed obligatory school, 50% completed post-secondary diploma and 20% achieved a

bachelor's degree or higher. Among the adolescent participants that participated at both time points, 39% were of non-Swiss nationality (Kosovo: 21%, Portugal: 12%, Serbia: 10%, Germany: 9%, Italy: 7%, Macedonia: 6%, Turkey: 6%, other nationalities: 31%).

9.2.2 Attrition and Missing Data Analysis

Of the original sample with 1128 participants, 83 percent of the students also participated in the following year. We analyzed sample attrition with respect to the main study variables at T1 by comparing adolescents who participated at both, T1 and T2, and adolescents who dropped out of the study before T2 using a binary logistic regression analysis. The results of this analysis showed that none of the primary study variables at T1 (i.e., cross-group friendship, trust, sympathy, and inclusive attitudes) were associated with attrition. We accounted for missing data with maximum-likelihood estimation (method: ML) in M*plus* 7.3 (Muthén & Muthén, 1998-2012).

9.2.3 Measures

Descriptive statistics, correlations, and reliability coefficients of the study variables are shown in Table 1.

Identification of SEN students. To assess academic achievement, teachers rated each student on three items (e.g., "Performing academically at grade level"), which were responded on a five-point response scale (1 = almost always to 5 = almost never) (Hughes, Dyer, Luo, & Kwok, 2009). The reliability of this scale was $\alpha = .94$ (at T1 & T2) and the scale had a high stability across the two time points, $r = .89$ ($p < .01$). Additionally, we asked teachers to nominate their students who received additional support from a teacher with special competencies in teaching students with SEN. Students who were nominated to receive this additional support and scored in the lowest 20% of the sample in their academic achievement were classified as having SEN due to low academic achievement.

Number of cross-group friends (T1). In order to measure cross-group friendships between adolescents with typical academic achievement and their classmates with low academic achievement, adolescents were asked to nominate their best friends from their classroom. To enhance reliability, the number of choices was unlimited (Knoke & Yang, 2008). Based on these choices, social networks were constructed for each classroom in the statistical environment R (R Development Core Team, 2015). As friendship requires mutuality (Bukowski et al., 2009), we only extracted reciprocated cross-group friendships from the social networks.

Following this procedure, 44 % of students with typical academic achievement had at least one cross-group friend (n = 406, students with friends: Range = 1-5 cross-group friends, M = 1.33, SD = 0.63). The number of friends at T1 and T2 was highly stable across the two time points, r = .84, p > .01. As we were interested in the consequences of cross-group friendships on adolescents' intended inclusion, we did not control for the number of friends at T2. Additionally, from a methodological point of view, the inclusion of this variable would have impeded the estimation of model indices. To assess the impact of the number of friends at T2, we also estimated an alternative model including this variable; this procedure did not change the results. Additionally, the number of friends at T1 and T2 had a very high stability, r = .84, p < .01.

Intended inclusion (T1 & T2). Students were asked to imagine being in another classroom and read a short description about an unfamiliar adolescent with low academic achievement (i.e., "[name of hypothetical child, e.g., Kai] needs a lot of time and support to do class work"). To control for sex differences, the sex of the protagonist was matched with the sex of the participant. Adolescents rated three questions regarding the social inclusion of this individual on a four-point scale (1 = not at all to 4 = very much). For example, they were asked how willing they would be to invite this student to their birthday party or to spend the break time in school with that student (for similar scales see Cameron & Rutland, 2006; Grütter & Meyer, 2014). Higher scores represented more positive attitudes towards the inclusion of students with low academic achievement.

Intergroup trust (T1 & T2). We assessed intergroup trust following the items on intended inclusion of students with low academic achievement with three items adapted from prior studies on intergroup trust in adolescents (e.g., Turner et al., 2007). These items focused on emotional aspects of trust (Rotenberg, 2010), such as secret sharing, general trust, and emotional disclosure towards a hypothetical child with SEN ("Would you trust [Kai] with your most important secret?", "Would you trust [Kai]?", "Would you talk about your problems with [Kai]?"). The items were answered on a four-point Likert scale (1 = not at all, 4 = very much).

Intergroup sympathy (T1 & T2). This measure consisted of three items adapted from prior studies (Gasser et al., 2013). The items were assessed following the description of the hypothetical student with low academic achievement (see above) and asked adolescents about their emotional reaction if this student was being excluded or treated unfairly (e.g., „Would you feel sorry for [Kai] if he had no friends in school?"). The items were answered on a 4-point Likert-scale (1 = not at all, 4 = very much).

Intergroup Anxiety (T1). As prior research has highlighted the role of intergroup anxiety (i.e., negative feelings about being in an unfamiliar place with out-group members) for adolescents' intergroup attitudes (Stephan & Stephan, 1985), we controlled for adolescents' initial levels of intergroup anxiety. This measure was adapted from Feddes et al. (2009) and Turner et al. (2007), who modified this scale from the original work of Stephan and Stephan (1985) to be suitable for children. Participants were asked, "Imagine that a new student, who you do not know yet, is introduced to your classroom. He or she needs a lot of time and support to do class work. He or she approaches you during break time and asks you to spend time with him or her. How would you feel?" Answers were assessed on three 5-point semantic differential items: Relaxed–nervous, pleased–worried, and comfortable–tense, and coded so that higher scores reflect higher levels of anxiety. The sex of the protagonist was matched with the sex of the participant.

9.2.4 Data Analytic Approach

To analyze our mediation hypotheses, we specified a parallel latent change score model (see Figure1), which contained the number of cross-group friends (T1) as a predictor for intended inclusion at T2 and the two mediators change in intergroup trust and intergroup sympathy. To model the changes of sympathy and trust over time, we used latent change score modeling (Selig & Preacher, 2009) with three indicators for each latent variable. We chose latent change score modeling for the two mediation hypotheses, because we were interested in the role of *intraindividual change* in intergroup trust and sympathy and in *interindividual differences* in this change. Latent change score models capture the development of a construct with two latent random factors: Intercept (e.g., initial trust in SEN students) and slope (e.g., change over time in trust; Selig & Preacher, 2009). As change is represented as a latent construct with a mean and variance component, we were able to simultaneously model *intra-individual* development (e.g., mean-level changes in intergroup trust and sympathy within adolescents) and *inter-individual* differences in such development (e.g., differences between adolescents in their change in intergroup trust or intergroup sympathy). We hypothesized that the number of cross-group friends would predict higher levels of change in intergroup trust and sympathy and that this change in turn would predict adolescents' intended inclusion. By controlling for individual starting levels (i.e., the intercept) we also partialled out the effects of initial levels of trust and sympathy on their development over time. In other words, we tested if change in trust and sympathy had an additive effect above and beyond the initial levels of trust and sympathy. In addition, we were

able to test whether adolescents with cross-group friends who had low initial levels of trust and sympathy would change more than adolescents with low starting levels.

To increase the robustness of the model, we controlled for adolescents' intended inclusion at T1. Further, we considered intergroup trust and sympathy simultaneously, examining the unique role of each mediator while also controlling for their interdependence. Thus, we controlled for the correlation between trust and sympathy at T1 and at the latent level (see Figure 1). As prior research has also highlighted the role of intergroup anxiety for adolescents' intergroup attitudes (Stephan & Stephan, 1985), we controlled for adolescents' initial levels of intergroup anxiety (at T1). Furthermore, preliminary analyses (see Table 1) showed that – compared to girls – boys had lower levels of intergroup trust, intergroup sympathy, and reported lower intended inclusion. Therefore, sex was included as control variable and, lastly, we also controlled for age differences.

As the students were part of different school classes, we had to consider between-group variance (Bliese, 2000). Therefore, we examined if adolescents' intergroup trust, intergroup sympathy and intended inclusion depended on their school class membership. According to the *ICC(1)* values, which denote the proportion of overall variance that is explained by school class membership, classroom membership explained between 2% and 7% of the total variance in the different variables. However, including a multilevel structure into the model did not result in an accurate estimation of the standard errors, as we had more parameters to estimate than school classes. Therefore, we did not include the multilevel structure in our final model.
Before testing our model, we first assessed measurement invariance (MI; i.e., the consistency with which our constructs of interest were measured) across time. This procedure is required to ensure the proper interpretation of longitudinal findings (Widaman, Ferrer, & Conger, 2010).

All analyses were conducted in M*plus* 7.3 (Muthén & Muthén, 1998-2012). To evaluate our model, we used the model fit indices comparative fit index (CFI; good fit > .90), the root mean square error of approximation (RMSEA; good fit < .07) with the 90% confidence interval and standardized root-mean-square residual (SRMR; good fit < .08) (Schermelleh-Engel, Moosbrugger, & Müller, 2003).

9.3 Results

In line with our main research goal (i.e., how students from the majority group without SEN thought about including students from the minority group with low academic achievement), we removed adolescents from the minority group from the statistical analyses.

Nevertheless, students with SEN were included in the description of the sample as their information was used to create the social networks of each classroom and to identify the number of cross-group friends from these social networks. The final sample size used for the analyses contained n = 923 students at T1 and n = 770 students at T2 who showed a typical development of their academic skills.

9.3.1 Longitudinal Measurement Invariance

Confirmatory factor analyses (CFAs) were used to establish the MI of our instruments over time (Steenkamp & Baumgartner, 1998). We tested three nested models of MI, namely configural, metric, and scalar invariance, which impose increasingly restrictive constraints on the factor loadings (λ) and intercepts (τ) of the items composing each scale. Scalar or strong invariance implies that the mean differences in the items across time stem from differences in the means of their respective latent factors. Since our goal was to model the mean-level development of adolescents' intended inclusion in relation to the mean-level development in intergroup trust and intergroup sympathy, *scalar invariance* was required (Widaman et al., 2010).

To identify scales and means for latent variables, we fixed the factor loading of the marker item for each factor to 1 and its intercept to 0 (Steenkamp & Baumgartner, 1998). We calculated $\Delta\chi^2$ tests of these nested models in order to test differences among configural, metric, and scalar MI. Because the $\Delta\chi^2$ test is sensitive to sample size and minor model misspecifications, we also considered the ΔCFI test with a critical level of .01 (see Cheung & Rensvold, 2002). In line with Cheung and Rensvold's (2002) guidelines for measurement equivalence, observed decrease in fit can be attributed to sampling error rather than a lack of equivalence when $\Delta CFI \leq .01$.

The longitudinal MI analyses revealed that intergroup trust, intergroup sympathy and inclusive attitudes reached scalar invariance (trust: $\Delta\chi^2$ [2] = 0.58, p = .75, ΔCFI = .001; sympathy: $\Delta\chi^2$ [2] = 4.18, p = .12, ΔCFI = .001; inclusive attitudes: $\Delta\chi^2$ [2] = 9.17, p = .01, ΔCFI = .003) thereby, allowing for the meaningful comparison of latent-level means (Steenkamp & Baumgartner, 1998). A detailed technical report is available upon request to the first author. Across time, all items showed positive and statistically significant factor loadings on their intended latent factor (range of standardized factor loadings: 0.66-0.88).

9.3.2 General Model

The hypothesized model fit the data well, CFI = .97, RMSEA = .04 [90% CI: .04 – .05, p = .99], SRMR = .04. The results from the model showed that at T1, cross-group friendships

did not predict intergroup trust (intercept), intergroup sympathy (intercept), nor intended inclusion. However, these variables were significantly related to the level of intergroup anxiety at T1 (see Table 2). Thus, individuals with higher levels of intergroup anxiety showed lower intergroup trust, lower intergroup sympathy and lower intended inclusion.

Additionally, there was significant variance in the latent change score of intergroup trust (ζ^2 = 0.59, SE = .03, $p < .001$) and sympathy (ζ^2 = .66, SE = 0.03, $p < .001$); this means that there were significant differences between individuals in their intraindividual change in trust and sympathy.

9.3.3 Mediation Analysis

Intergroup trust. In line with our hypothesis, the number of cross-group friends at T1 significantly predicted intraindividual change in intergroup trust (i.e., the slope), and this change in intergroup trust predicted intended inclusion at T2 (see Figure 1). To test for the significance of this indirect effect (ab), we included this indirect path in the model and estimated the confidence intervals (CI) using a resampling method with the bias-corrected bootstrap method (MacKinnon, Lockwood, & Williams, 2004). This procedure has revealed the most accurate confidence limits in previous simulation studies as it takes into account the non-normal distribution of the indirect effect (MacKinnon et al., 2004). The results of 5'000 bootstrapped samples showed that the unstandardized mediated effect was statistically significant (*ab* = .04, *SE* = 0.02, 95% CI [.01, .06]), as the 95% lower and upper CI limits did not include zero. Thus, interindividual differences in how adolescents changed in their trust from T1 to T2 accounted for the positive relationship between the number of cross-group friends at T1 and intended inclusion at T2.

Intergroup sympathy. Hypothesis two assumed that – according to the hypothesis for intergroup trust – students with cross-group friends would increase in their intergroup sympathy over the year and that this change would result in a higher intended inclusion. In line with this assumption, the number of cross-group friends at T1 was significantly related to the latent change in intergroup sympathy, and this change in intergroup sympathy was significantly associated with intended inclusion. In other words, the more cross-group friends adolescents had, the more they increased in their sympathy for low achieving students over time; this increased sympathy in turn predicted intended inclusion. Using the same method as for intergroup trust, the results indicated that the unstandardized mediated effect was statistically significant (ab = .02, *SE* = 0.01, 95% CI [.01, .04]).

9.3.4 Supplementary Analyses

To test our assumption that individuals with cross-group friends who already showed high trust and sympathy at T1 would increase less over the year, we conducted supplementary analyses. We compared the change in trust and sympathy for individuals with lower initial levels with individuals who reported higher initial levels.

Individuals with lower levels of trust at T1 (below 1 *SD* from the mean) increased more in their trust over the year (n = 158, M = 0.63, SD = 0.69) compared to individuals with higher initial levels (above 1 *SD* from the mean; n = 197, M = -0.87 SD = 0.85), whereby this difference was significant, $t(1054.55) = -15.42$, $p < .001$, $d = -0.83$. In addition, individuals with higher levels of sympathy for low achieving students at T1 showed less change in sympathy over the year (see Figure 1). Results revealed that individuals with low levels of sympathy at T1 (below 1 *SD* from the mean) increased more in their sympathy over the year (n = 68, M = 0.90, SD = 0.92) compared to individuals with high initial levels, (above 1 *SD* from the mean; n = 476, M = -0.23, SD = 0.44), whereby this difference was significant, $t(1212.67) = -31.55$, $p < .001$, $d = -1.60$.

9.4 Discussion

This study investigated friendships between adolescents who received special education and their peers without special education in inclusive classrooms. Of particular interest was the question if such friendships lead to more inclusive attitudes in the majority group of students without special education. The second goal of this study was to gain an understanding of the processes that mediate this relationship. Thereby, we focused on the role of change in trust and sympathy and investigated if such friendships would lead to changes in intergroup trust and sympathy, and whether these changes would predict attitudes towards the inclusion of students with SEN in the long run.

The findings from a parallel latent change score model were in line with these assumptions and indicated that trust and sympathy for out-group members of individuals with cross-group friends increased over the school year (with the number of cross-group friendships at the beginning of the year), and that this increase predicted inclusion towards hypothetical SEN students at the end of the year. This finding speaks to the significance of cross-group friendships in inclusive school classes and is in line with prior results showing a positive relationship between cross-group friendships and positive attitudes towards SEN students (Grütter & Meyer, 2014). Additionally, prior research also suggests that contact between children from different social backgrounds and with different abilities results in

higher acceptance of integrative schooling (Kalyva & Agaliotis, 2009). Extending this prior research that was based on correlational findings, this is the first study that employed a longitudinal design to analyze the relationship between cross-group friendships and adolescents' inclusive attitudes towards students with SEN.

Moreover, focusing on a sample of early adolescents in the context of inclusive schools, this study also demonstrates that cross-group friendships may still be of particular significance, even though group pressure increases during this period and early adolescents face higher academic pressure. The early adolescents of this sample were facing transferal to secondary school based on their academic achievement. Thus, adolescents may have been under a strong pressure to perform and therefore, less willing to include students with SEN as the inclusion of an SEN student might have impeded group functioning. When facing academic pressure, adolescent may choose to exclude individuals with SEN, as their low academic performance does not conform to group norms of well performing groups (Gasser et al., 2013). The positive impact of cross-group friendships on adolescents' inclusive attitudes may be explained with the heightened significance of friendships and increased friendship closeness (Cairns et al., 1995). To shed light on these possible mechanisms and to explain these positive effects of cross-group friendships, the current study investigated the underlying processes of cross-group friendships; therefore, this study allowed for a better understanding of how prejudice can be reduced during this sensitive period with conflicting demands of belonging to high status peer groups and being inclusive.

Specifically, this study focused on two affective mediators of cross-group friendship: Trust and sympathy. Extending prior research (e.g., Turner et al., 2007), this study shows that cross-group friendships with SEN students may go along with increasing levels of trust in SEN students, and that this increase in turn predicts more inclusive attitudes longitudinally. As a conclusion, cross-group friendships that are characterized by greater trust may be significant in reducing prejudice during adolescence. In addition to trust, the results of this study suggest that sympathy may reflect another central component for promoting inclusive attitudes among adolescents. As noted by prior research, individuals need to feel personal concern for their out-group friends when these are suffering from negative consequences, such as peer exclusion or peer-harassment. A single focus on social-cognitive aspects, such as the understanding of the perspective of out-group members, may not be sufficient for reducing prejudice. Moral emotions, such as sympathy, need be considered as well in order explain individual differences in prosocial behavior (Eisenberg, 2000; Malti, Gasser, & Gutzwiller-Helfenfinger, 2010).

Prior research on cross-group friendship has focused on the role of empathy assuming that a friend's feelings may also – to some extent – be experienced as one's own. With greater closeness, the friend is treated as part of oneself; thereby the social identity of the out-group friend may also be treated as one's own to some extent (Aron, Aron, & Smollan, 1992). This emotional involvement is represented by feelings of empathy and feelings of sympathy; however, in contrast to empathy, sympathy does not necessarily involve feeling the same emotions as the other, but rather feeling concern for the other (Eisenberg et al., 2010). In this study, we focused on sympathy, as prior research has shown that feeling the same emotions as a victimized out-group member may cause personal distress and feelings of personal vulnerability. As a consequence, individuals may associate these negative emotions with out-group members and show less desire to interact with out-group members (Vorauer & Sasaki, 2009). Moreover, in contrast to most of the prior studies on intergroup contact that assessed dispositional empathy (i.e., empathy as a trait), we assessed sympathy as an emotional reaction to a specific situation: The social exclusion of an out-group member. Dispositional empathy provides limited information about how individuals may behave in a specific social context (Eisenberg et al., 2010). Accordingly, prior studies on social exclusion of out-group members have shown that specific moral emotions depend on social context (Malti, Killen, & Gasser, 2012). Taken together, measuring sympathy in the context of social exclusion in inclusive classrooms may be more predictive of students' inclusive attitudes.

Importantly, by using a parallel latent change score model, we accounted for the processes underlying cross-group friendships and assumed a dynamic understanding of how trust and sympathy may increase over time. In line with this idea, the results showed a significant variability between individuals. This means that some adolescents changed more than others in a systematic way, with some adolescents increasing more than others. This finding resonates with recent related research on individual differences in intergroup contact in adult samples. Specifically, researchers have argued that there is little sense in theorizing a general recipe of intergroup contact as a means to reduce prejudice without acknowledging individual differences (Hodson, Costello, & MacInnis, 2013; Pettigrew, 1998).

Additionally, we accounted for the possibility that individuals with high initial levels of trust and sympathy had fewer options to change compared to individuals with lower initial values. Subsequent analyses showed that individuals with low trust and low sympathy increased more over the year. As this change was positively related to more inclusive attitudes, the findings suggest that cross-group friendships particularly enhanced inclusive attitudes in individuals who had low trust in SEN students and did not show high levels of

concern when students with SEN were excluded or treated unfairly. Prior studies regarding cross-group friendship using children or adolescent samples do not explain why intergroup contact may be more beneficial for some individuals than for others. Allport (1954) acknowledged that contact rarely succeeds among all individuals uniformly; nevertheless, individual differences have remained unexamined till recently (Hodson et al., 2013), and there has been little prior research regarding children or adolescents (for exceptions see for example Munniksma, Stark, Verkeuyten, Flache, & Veenstra, 2013). In line with the results of this prior study and the results from adult samples (e.g., Hodson et al., 2013), the findings of this study suggest that cross-group friendships may particularly promote more inclusive attitudes among more biased adolescents. This is likely, as for individuals who already hold more inclusive attitudes, more positive experiences with out-group members will have a smaller impact in changing their attitudes (Hodson et al., 2013).

In this study, the number of cross-group friendships at T1 was not significantly related to intergroup sympathy or trust. Instead, greater levels of intergroup anxiety predicted lower intergroup sympathy and trust. When individuals felt uncomfortable about being alone with an unfamiliar SEN student, they reported lower trust in unfamiliar SEN students and lower sympathy for unfamiliar SEN students. Prior studies have shown that intergroup anxiety is an important mediator of intergroup contact (Pettigrew & Tropp, 2008), particularly when there has been no prior interaction (Turner et al., 2007). High levels of intergroup anxiety may impede with positive effects of intergroup contact or even worsen intergroup attitudes, as individuals may focus on negative aspects during intergroup interactions because they expect rejection or discrimination (Stephan & Stephan, 1985). Additionally, individuals with high levels of anxiety may rely on stereotypes when evaluating out-group members (Stephan & Stephan, 1985) and try to avoid intergroup contact. Regarding inclusive classrooms, children who had peers with physical disabilities reported higher levels of intergroup anxiety than students form non-inclusive classrooms (Bustillos & Silvan-Ferrero, 2013). Thereby, contacts between students with and without SEN may even increase negative attitudes (Cameron & Rutland, 2006). The findings from this study align with these assumptions as intergroup anxiety was negatively related to intended inclusion. Furthermore, higher levels of intergroup anxiety may go along with low levels of trust, as individuals expect negative consequences from intergroup interactions. Accordingly, prior studies showed that a decrease in intergroup anxiety was related to an increase in trust (Swart, Hewstone, Turner, & Voci, 2011).

The results of this study show that intergroup anxiety was negatively correlated with intergroup trust, but not with changes in intergroup trust. Taken together, these findings

suggest that intergroup anxiety may impede with positive consequences of cross-group friendships in early stages of the friendship; over time however, anxiety may dissolve, as friendships become characterized by trust and sympathy. In sum, as suggested by prior studies, intergroup anxiety may be more important in early stages of friendship formation (Turner et al., 2007), as they go along with contact avoidance. Once friendship is established, anxiety may be less important, as friends know what to expect from each other and, more importantly, trust each other.

Friendships are not only important for the majority group, but also for SEN students, as it is an important predictor for individual wellbeing, for self-worth, and for adjustment to school (Bagwell, Newcomb, & Bukowski, 1998). Additionally, cross-group friendships may enhance feelings of social-emotional safety at school, particularly for minority group members (Munniksma & Juvonen, 2012). Moreover, regarding students with SEN, having friends without SEN would significantly enlarge their social network and provide opportunities for social learning. Thus, schools may provide opportunities for collaboration and out-of-class voluntary contact, as closeness is an important prerequisite for the formation of friendships (Tropp & Prenovost, 2008). However, friendship is seen as a personal choice and children regard exclusion of peers from friendship contexts as legitimate (Killen, Lee-Kim, McGlothlin, & Stangor, 2002). Therefore, promoting cross-group friendships may pose a challenge for professionals in inclusive education. The results of this study suggest, that promoting trust and sympathy for students with SEN may also foster inclusive attitudes in adolescents without SEN. Consequently, encouraging trust in and concern for students with different ability levels may be significant for inclusive school environments.

This study is not without limitations. First, although allowing for more reliable assumptions regarding the positive consequences of cross-group friendships and the mediation hypotheses, the study contained only two waves of data collection. In order to employ a full mediation model, three waves would be required (Selig & Preacher, 2009). Second, prior studies emphasize a bidirectional and dynamic understanding of the intergroup contact – prejudice relationship (e.g., Munniksma et al., 2015) whereby the link from friendship to attitudes has been shown to be stronger (Swart et al., 2011). In this study, we did not control for adolescents' number of cross-group friends at T2, as our primary interest concerned adolescents' inclusive attitudes. Including friendship at T2 would have impeded the estimation of model indices without improving the model fit. The number of friends at T1 and T2 was highly stable across the two time points; nevertheless, we did not have any information about the duration of friendships. Therefore, we did not know how long

adolescents had been friends for. Third, although we were able to assess mechanisms of cross-group friendships at two time points, we were not able to suggest timely relationships between the variables. Some studies assume, for example, that cross-group friendship leads to enhanced empathy, and this in turn would enhance out-group trust (Swart et al., 2011; Turner et al., 2007). However, these studies have been cross-sectional and it remains unclear, whether trust would need to be established first in order to enhance empathy. In this study, we tested sympathy and trust simultaneously while controlling for their correlation, as we assumed a bidirectional relationship between trust and sympathy. Future research employing a multiple-waves design may shed light on this question regarding the importance of sympathy and trust in the process of friendship formation.

In sum, this study shows that friendships between students with SEN due to low academic achievement and their typically developing peers may enhance inclusive attitudes of adolescents without SEN. Cross-group friendships in adolescence may enhance trust in and sympathy for in out-group members and therefore relate to higher peer inclusivity; particularly in adolescents who express stronger in-group bias. As noted by Bukowski and Sippola (1996), morally excellent friendships are qualified by a deep concern for others as well as high levels of trust and commitment. In this way, cross-group friendships may be morally excellent friendships.

References

Abbott, N., & Cameron, L. (2014). What makes a young assertive bystander? The effect of intergroup contact, empathy, cultural openness, and in-group bias on assertive bystander intervention intentions. *Journal of Social Issues, 70*, 167–182. doi:10.1111/josi.12053

Aboud, F. E., & Spears Brown, C. (2013). Positive and negative intergroup contact among children and its effect on attitudes. In G. Hodson & M. Hewstone (Eds.), *Advances in intergroup contact* (pp. 176–199). New York: Routledge. doi:10.4324/9780203095461

Allport, G. W. (1954). *The nature of prejudice.* Reading, MA: Addison-Wesley Publishing Company.

Armstrong, M., Morris, C., Abraham, C., Ukoumunne, O. C., & Tarrant, M. (2016). Children's contact with people with disabilities and their attitudes towards disability: A cross-sectional study. *Disability and Rehabilitation, 38*, 879–888. doi:10.3109/09638288.2015.1074727

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of Other in the Self Scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology, 63*, 596–612. doi:10.1037/0022-3514.63.4.596

Arsenio, W. F., Gold, J., & Adams, E. (2006). Children's conceptions and displays of moral emotions. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development* (pp. 581 – 609). Mahwah, NJ: Erlbaum.

Bagwell, C. L., Newcomb, A. F., & Bukowski, W. M. (1998). Preadolescent friendship and peer rejection as predictors of adult adjustment. *Child Development, 69*, 140–153. doi:10.1111/j.1467-8624.1998.tb06139.x

Bates, H., McCafferty, A., Quayle, E., & McKenzie, K. (2015). Review: Typically-developing students' views and experiences of inclusive education. *Disability and Rehabilitation, 37*, 1929–1939. doi:10.3109/09638288.2014.993433

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 349–381). San Francisco: Jossey-Bass.

Bossaert, G., de Boer, A. A., Frostad, P., Pijl, S. J., & Petry, K. (2015). Social participation of students with special educational needs in different educational systems. *Irish Educational Studies, 34*, 43–54. doi:10.1080/03323315.2015.1010703

Bukowski, W. M., & Sippola, L. K. (1996). Friendship and morality: (How) are they related? In M. W. Bukowski, A. F. Newcomb, & W. W. Hartup (Eds.), *The company they kee*p (pp. 238–261). Cambridge, MA: Cambridge University Press.

Bukowski, W., Motzoi, C., & Meyer, F. (2009). Friendship as process, function, and outcome. In K. Rubin, W. Bukowski, & B. Laursen (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 217–231). New York: Guilford Press.

Bustillos, A., & Silvan-Ferrero, M. d. P. (2013). Attitudes toward peers with physical disabilities at high school: Applying the integrated threat theory. *Rehabilitation Counseling Bulletin, 56*, 108–119. doi:10.1177/0034355212451145

Cairns, R. B., Leung, M., Buchanan, L., & Cairns, B. D. (1995). Friendships and social networks in childhood and adolescence: Fluidity, reliability, and interrelations. *Child Development, 66*, 1330–1345. doi:10.2307/1131650

Cameron, L., & Rutland, A. (2006). Extended contact through story reading in school: Reducing children's prejudice towards the disabled. *Journal of Social Issues, 62*, 469–488. doi:10.1111/j.1540-4560.2006.00469.x

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 9*, 233–255. doi:10.1207/S15328007SEM0902_5

Dijkstra, J. K., & Gest, S. D. (2015). Peer norm salience for academic achievement, prosocial behavior, and bullying: Implications for adolescent school experiences. *Journal of Early Adolescence, 35*, 79–96. doi:10.1177/0272431614524303

Eisenberg, N., Eggum, N. D., & Di Giunta, L. (2010). Empathy-related responding: Associations with prosocial behavior, aggression, and intergroup relations. *Social Issues and Policy Review, 4*, 143–180. doi:10.1111/j.1751-2409.2010.01020.x

Feddes, A. R., Noack, P., & Rutland, A. (2009). Direct and extended friendship effects on minority and majority children's interethnic attitudes: A longitudinal study. *Child Development, 80*, 377–390. doi:10.1111/j.1467-8624.2009.01266.x

Fiske, S. T., & Taylor, S. E. (2013). *Social cognition. From brains to culture* (2nd ed.). London, UK: Sage Publications Ltd.

Gasser, L., Malti, T., & Buholzer, A. (2013). Children's moral judgments and moral emotions following exclusion of children with disabilities: Relations with inclusive education, age, and contact intensity. *Research in Developmental Disabilities, 34*, 948–958. doi:10.1016/j.ridd.2012.11.017

Grütter, J., & Meyer, B. (2014). Intergroup friendship and children's intentions for social exclusion in integrative classrooms: The moderating role of teachers' diversity beliefs. *Journal of Applied Social Psychology, 44*, 481–494. doi:10.1111/jasp.12240

Grütter, J., Meyer, B., & Glenz, A. (2015). Sozialer Ausschluss in Integrationsklassen: Ansichtssache? [Social exclusion in inclusive classrooms: A question of viewpoint?] *Psychologie in Erziehung und Unterricht, 62*, 65–82. doi:10.2378/peu2015.art05d

Hodson, G., Costello, K., & MacInnis, C. C. (2013). Is intergroup contact beneficial among intolerant people? Exploring individual differences in the benefits of contact on attitudes. In G. Hodson & M. Hewstone (Eds.), *Advances in intergroup contact* (pp. 49–80). London, UK: Psychology Press.

Hughes, J. N., Dyer, N., Luo, W., & Kwok, O.-M. (2009). Effects of peer academic reputation on achievement in academically at-risk elementary students. *Journal of Applied Developmental Psychology, 30*, 182–194. doi:10.1016/j.appdev.2008.12.008

Kahn, P. H., & Turiel, E. (1988). Children's conceptions of trust in the context of social expectations. *Merrill-Palmer Quarterly, 34*, 403–419.

Kalyva, E., & Agaliotis, I. (2009). Can contact affect Greek children's understanding of and attitudes towards peers with physical disabilities? *European Journal of Special Needs Education, 24*, 213–220. doi:10.1080/08856250902793701

Killen, M., Lee-Kim, J., McGlothlin, H., & Stangor, C. (2002). How children and adolescents evaluate gender and racial exclusion. *Monographs of the Society for Research in Child Development, 67*(4). doi: 10.1111/1540-5834.00220

Knoke, D., & Yang, S. (2008). *Social network analysis* (2nd ed.). Thousand Oaks, Calif.: Sage Publications.

MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research, 39*, 99–128. doi:10.1207/s15327906mbr3901_4

Malti, T., Averdijk, M., Zuffiano, A., Ribeaud, D., Betts, L. R., Rotenberg, K. J., & Eisner, M. P. (2016). Children's trust and the development of prosocial behavior. *International Journal of Behavioral Development, 40*, 262-270. doi: 10.1177/0165025415584628

Malti, T., Gasser, L., & Gutzwiller-Helfenfinger, E. (2010). Children's interpretive understanding, moral judgments, and emotion attributions: Relations to social behaviour. *British Journal of Developmental Psychology, 28*, 275–292. doi:10.1348/026151009X403838

Malti, T., Killen, M., & Gasser, L. (2012). Social judgments and emotion attributions about exclusion in Switzerland. *Child Development, 83*, 697–711. doi:10.1111/j.1467-8624.2011.01705.x

Maxwell, S. E., Cole, D. A., & Mitchell, M. A. (2011). Bias in cross-sectional analyses of longitudinal mediation: Partial and complete mediation under an autoregressive model. *Multivariate Behavioral Research, 46*, 816–841. doi:10.1080/00273171.2011.606716

Munniksma, A., & Juvonen, J. (2012). Cross-ethnic friendships and sense of social-emotional safety in a multiethnic middle school: An exploratory study. *Merrill-Palmer Quarterly, 58*, 489–506. doi:10.1353/mpq.2012.0023

Munniksma, A., Stark, T. H., Verkuyten, M., Flache, A., & Veenstra, R. (2013). Extended intergroup friendships within social settings: The moderating role of initial outgroup attitudes. *Group Processes & Intergroup Relations, 16*, 752–770. doi:10.1177/1368430213486207

Munniksma, A., Verkuyten, M., Flache, A., Stark, T. H., & Veenstra, R. (2015). Friendships and outgroup attitudes among ethnic minority youth: The mediating role of ethnic and host society identification. *International Journal of Intercultural Relations, 44*, 88–99. doi:10.1016/j.ijintrel.2014.12.002

Muthén, L. K., & Muthén, B. O. (2014). *Mplus User's Guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.

Newcomb, A. F., & Bagwell, C. L. (1995). Children's friendship relations : A meta-analytic review. *Psychological Bulletin, 117*, 306–347. doi:10.2307/353560

Nowicki, E. A. (2012). Intergroup evaluations and norms about learning ability. *Social Development, 21*, 130–149. doi:10.1111/j.1467-9507.2011.00614.x

Nowicki, E. A., & Sandieson, R. (2002). A meta-analysis of school-age children's attitudes towards persons with physical or intellectual disabilities. *International Journal of Disability, Development and Education, 49*, 243–265. doi:10.1080/1034912022000007270

Padilla-Walker, L. M., Fraser, A. M., Black, B. B., & Bean, R. A. (2015). Associations between friendship, sympathy, and prosocial behavior toward friends. *Journal of Research on Adolescence, 25*, 28–35. doi:10.1111/jora.12108

Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Review of Psychology, 49*, 65–85. doi:10.1146/annurev.psych.49.1.65

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*, 751–783. doi:10.1037/0022-3514.90.5.751

Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology, 38*, 922–934. doi:10.1002/ejsp.504

Powell, J. J. W. (2006). Special education and the risk of becoming less educated. *European Societies, 8*, 577–599. doi:10.1080/14616690601002673

R Development Core Team (2013). *R: A language and environment for statistical computing*. Computer Software. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from http://www.R-project.org

Rose, C. A., Monda-Amaya, L. E., & Espelage, D. L. (2011). Bullying perpetration and victimization in special education: A review of the literature. *Remedial and Special Education, 32*, 114–130. doi:10.1177/0741932510361247

Rotenberg, K. J. (1986). Same-sex patterns and sex differences in the trust-value basis of children's friendship. *Sex Roles, 15*, 613–626. doi:10.1007/BF00288218

Rotenberg, K. J. (2010). The conceptualization of interpersonal trust: A basis, domain, and target framework. In K. J. Rotenberg (Ed.), *Interpersonal trust during childhood and adolescence* (pp. 8–27). doi:http://dx.doi.org/10.1017/CBO9780511750946.002

Rotenberg, K. J., & Cerda, C. (1994). Racially based trust expectancies of native American and Caucasian children. *Journal of Social Psychology, 134*, 621-631. doi:10.1080/00224545.1994.9922992

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Test of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online, 8*, 23–74. Retrieved from http://www.dgps.de/fachgruppen/methoden/mpr-online/issue20/art3/mpr130_13.pdf

Selig, J. P., & Preacher, K. J. (2009). Mediation models for longitudinal data in developmental research. *Research in Human Development, 6*, 144–164. doi:10.1080/15427600902911247

Steenkamp, J. E. M., & Baumgartner, H. (1998). Assessing measurement invariance in cross-national consumer research. *Journal of Consumer Research, 25*, 78–107. doi:10.1086/209528

Stephan, W. G., & Stephan, C. W. (1985). Intergroup anxiety. *Journal of Social Issues, 41*, 157–175. doi:10.1111/j.1540-4560.1985.tb01134.x

Swart, H., Hewstone, M., Christ, O., & Voci, A. (2011). Affective mediators of intergroup contact: A three-wave longitudinal study in South Africa. *Journal of Personality and Social Psychology, 101*, 1221–1238. doi:10.1037/a0024450

Swart, H., Hewstone, M., Turner, R. N., & Voci, A. (2011). Achieving forgiveness and trust in postconflict societies: The importance of self-disclosure and empathy. In L. R. Tropp & R. Mallett (Eds.), *Beyond prejudice reduction: Pathways to positive intergroup relations* (pp. 181–200). Washington, D.C.: American Psychological Association.

Tam, T., Hewstone, M., Kenworthy, J., & Cairns, E. (2009). Intergroup trust in Northern Ireland. *Personality and Social Psychology Bulletin, 35*, 45–59. doi:10.1177/0146167208325004

Tropp, L. R., & Prenovost, M. A. (2008). The role of intergroup contact in predicting children's interethnic attitudes: Evidence from meta-analytic and field studies. In S. R. Levy & M. Killen (Eds.), *Intergroup attitudes and relations in childhood through adulthood* (pp. 236–248). New York, NY: Oxford University Press.

Turner, R. N., Hewstone, M., Swart, H., Tam, T., Myers, E., & Tausch, N. (2010). Promoting intergroup trust among adolescents and young adults. In K. J. Rotenberg (Ed.), *Interpersonal trust during childhood and adolescence* (pp. 295–321). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511750946.014

Turner, R. N., Hewstone, M., & Voci, A. (2007). Reducing explicit and implicit outgroup prejudice via direct and extended contact: The mediating role of self-disclosure and intergroup anxiety. *Journal of Personality and Social Psychology, 93*, 369–388. doi:10.1037/0022-3514.93.3.369

United Nations Educational, Scientific and Cultural Organization (1994). *The Salamanca statement and framework for action on special needs education.* New York: UNESCO. Retrieved from http://www.unesco.org/education/pdf/SALAMA_E.PDF

Vorauer, J. D., & Sasaki, S. J. (2009). Helpful only in the abstract? *Psychological Science, 20*, 191–197. doi:10.1111/j.1467-9280.2009.02265.x

Widaman, K. F., Ferrer, E., & Conger, R. D. (2010). Factorial invariance within longitudinal structural equation models: Measuring the same construct across time. *Child Development Perspectives, 4*, 10–18. doi:10.1111/j.1750-8606.2009.00110.x

Table 1

Descriptive Statistics and Correlations Among the Study Variables

	M	*SD*	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Sex	–	–	(–)									
2. Age	12.52	0.53	.10**	(–)								
3. Number of cross-group friends (T1)	0.62	0.81	-.02	-.02	(–)							
4. Intergroup anxiety (T1)	1.80	0.76	.08*	.01	.01	(.80)						
5. Intergroup trust (T1)	2.24	0.74	-.24**	-.01	-.01	-.23**	(.81)					
6. Intergroup sympathy (T1)	3.56	0.59	-.19**	-.03	.05	-.27**	.34**	(.90)				
7. Intended inclusion (T1)	2.90	0.66	-.27**	.03	.05	-.32**	.58**	.51**	(.84)			
8. Intergroup trust (T2)	2.18	0.69	-.25**	-.04	.10**	-.15**	.32**	.21**	.30**	(.81)		
9. Intergroup sympathy (T2)	3.58	0.58	-.22**	-.04	.11**	-.17**	.18**	.40**	.26**	.40**	(.92)	
10. Intended inclusion (T2)	2.93	0.65	-.24**	-.03	.14**	-.19*	.22**	.28**	.40**	.59**	.53**	(.86)

Note. T1 = first measurement time; T2 = second measurement time; sex = 0 (female), 1 (male). Reliability coefficients are reported on the main diagonal.

† = .1 * = $p < .05$, ** = $p < .01$, two-tailed.

Table 2

Parameter Estimates for the Control Variables Sex, Age and Intergroup Anxiety

	Sex	*Age*	*Intergroup Anxiety*
	B	*B*	*B*
Intergroup trust (T1)	-0.26***	0.02	-0.24***
Intergroup sympathy (T1)	-0.17***	-0.01	-0.26***
Intended inclusion (T1)	-0.09**	0.05	-0.13***
Latent difference trust	-0.16***	-0.02	-0.04
Latent difference sympathy	-0.14***	-0.02	-0.02
Intended inclusion (T2)	0.01	-0.01	-0.02

Note. T1 = first measurement time; T2 = second measurement time; sex = 0 (female), 1 (male).

$p < .05$, ** = $p < .01$, two-tailed.

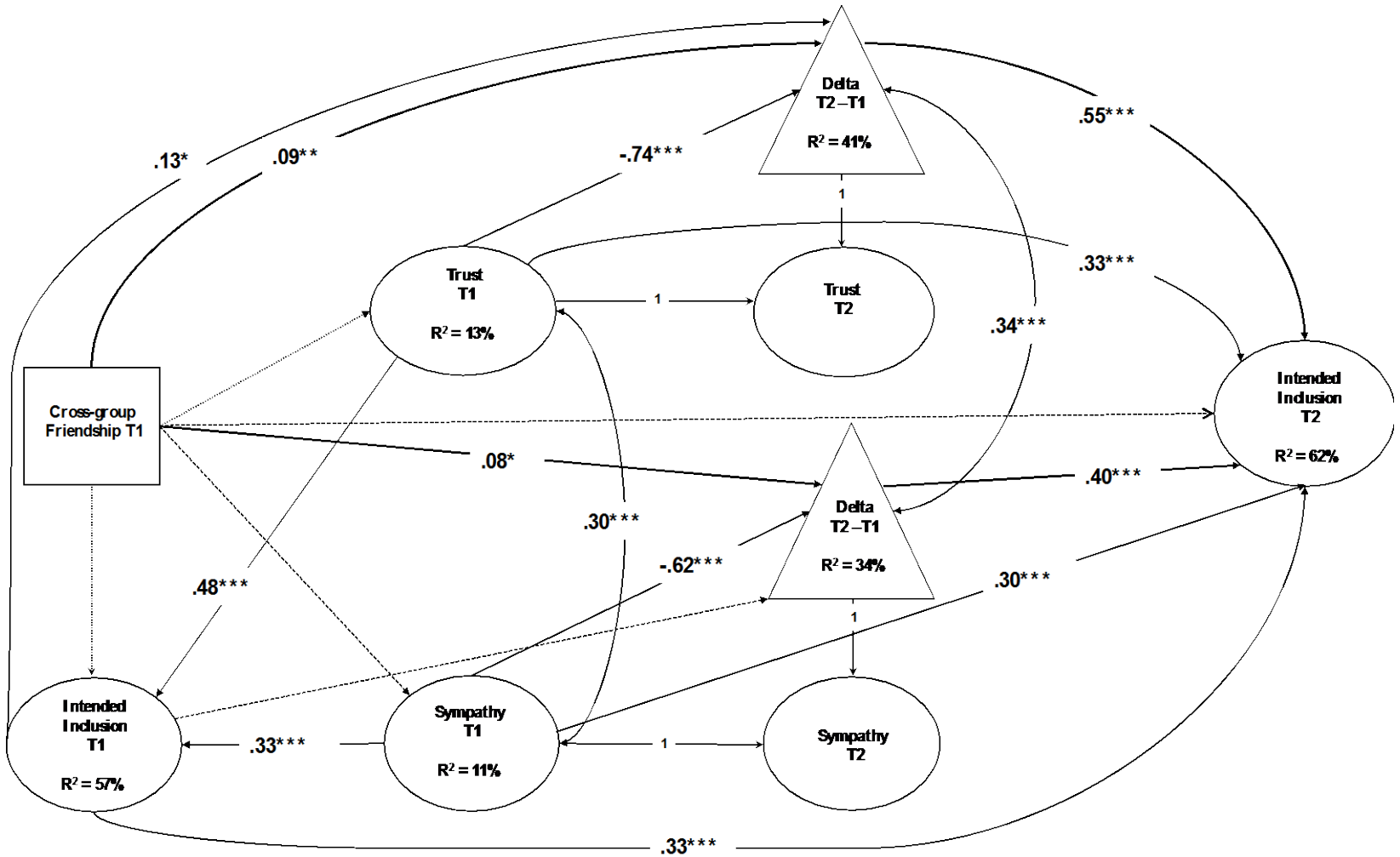


Figure 1. The relation between the number of cross-group friendships, intergroup trust, intergroup sympathy and attitudes towards inclusion; the two delta shapes represent the latent change variables; non-significant paths are shown by dashed arrows and standardized estimates are reported on the straight and curved arrows; in order to ease the interpretation of the figure, the items of the latent variables and their standard errors have been removed; $p < .05$, $p < .01$, $p < .001$

10 Chapter 5: Competitive Classroom Norms and Exclusion of Children with Academic and Behavior Difficulties

The reference to the final published version is:

Gasser, L., Grütter, J., Torchetti, L., & Buholzer, A. (2017). Competitive classroom norms and exclusion of children with academic and behavior difficulties. *Journal of Applied Developmental Psychology, 49*, 1-11. doi: 10.1016/j.appdev.2016.12.002

Competitive Classroom Norms and Exclusion of Children with Academic and Behavior Difficulties

Luciano Gasser[1]

Jeanine Grütter[1]

Loredana Torchetti[1]

Alois Buholzer[1]

[1]University of Teacher Education Lucerne, Switzerland

Acknowledgments: This study was funded by The Swiss National Science.
Correspondence concerning this article should be addressed to Luciano Gasser, Institute for School and Diversity, University of Teacher Education Lucerne, 6004 Lucerne, Switzerland. Electronic mail may be sent to luciano.gasser@phlu.ch

Highlights

- 1,009 children were investigated within a two-wave study (fifth and sixth grade)
- Children exclude more hypothetical hyperactive than low-achieving peers
- With grade children increasingly consider the context of exclusion
- Classroom competitive norms predict the exclusion of low-achieving children
- Competitive learning formats should be avoided in order to reduce social exclusion

Abstract

We investigated effects of classroom-level norms and individual competitive attitudes on children's exclusion of hypothetical peers with behavior or academic difficulties. Upper elementary school children (N = 1,009) from Switzerland were presented with four scenarios about social exclusion at two time points (fifth and sixth grade). These scenarios varied according to difficulty type of exclusion target (low-achieving vs. hyperactive) and context of exclusion (academic vs. social). Multilevel analyses revealed that children were more likely to exclude hypothetical hyperactive peers than low-achieving peers for reasons of effective group functioning. When children transferred to the sixth grade, they became more likely to coordinate the type of difficulty of the exclusion target with the context of exclusion. Moreover, competitive classroom-level norms and individual attitudes positively predicted the exclusion of low-achieving children. Consequently, competitive learning formats should be avoided in order to reduce exclusion of students who do not conform to school norms.

Keywords: Social exclusion, moral development, classroom norms

10.1 Introduction

Children with low academic achievement or behavior problems frequently experience social exclusion by their peers. Research indicates that compared to typically developing children, both academic and behavior problems are associated with social rejection and being involved in bullying or victimization (e.g., Estell et al., 2008; Mikami et al., 2015; Welsh, Park, Widaman, & O'Neil, 2001). In order to promote inclusion of children with low academic achievement or behavior problems, it is important not only to focus on the *excluded children* but also to develop an understanding of the perspective of *excluding children* and how they balance concerns about fairness and welfare with concerns about peer group functioning. How do children understand social exclusion of peers with academic or behavioral problems? What are children's decisions in hypothetical peer exclusion contexts and which concerns do they prioritize? Is it more important that students with academic and behavior difficulties are treated fairly or that the group can achieve its goals?

In this two-wave study (T1: Fifth grade, T2: Sixth grade), we investigated upper elementary grade students' exclusion decisions and justifications in hypothetical scenarios, which described low-achieving and hyperactive students. The upper elementary grades may represent a challenging developmental phase in countries like Switzerland whose secondary school systems distinguish between several performance levels. During the upper elementary grades, children are selected and streamed according to their grades; thus, students are under growing pressure to perform. This increasing pressure may have negative implication for the social inclusion of children who do not conform to academic and behavioral norms at school (Wettstein, Ramseier, Scherzinger, in press).

To improve educational practices for social inclusion it is further important to investigate how social-contextual factors such as classroom norms contribute to children's thinking and reasoning about social exclusion. Therefore, we also explored how classroom-level competitive norms contributed to children's exclusion decisions and their social reasoning, above and beyond children's individual competitive attitudes. To our knowledge, this is the first study including longitudinal data as well as social-contextual measures to investigate how competitive classroom norms and individual attitudes are related to children's exclusion decisions.

10.1.1 Decision Making and Social Reasoning About Social Exclusion

The present study was guided by the social reasoning developmental (SRD) perspective (Killen, Elenbaas, & Rutland, 2015; Killen & Rutland, 2011; Rutland & Killen, 2015) that aims to integrate social domain theory (Turiel, 1998) and social identity theory (Tajfel & Turner,

1979). According to the social identity theory, children seek to identify with social groups and define themselves by their group-membership; therefore, they view their groups as more positive than other social groups, which can lead to in-group bias. In-group bias serves important functions such as supporting children's self-worth and contributing to children's identity development. However, in-group bias also implies that children expect group members to conform to group norms which might result in unfair exclusion of individuals who do not fit group criteria. According to social domain theory, children and adolescents not only use group-based considerations, but also refer to moral criteria when reasoning about peer group exclusion. Therefore, children's developing understanding about fairness enable them to coordinate moral concerns with group concerns and to critically evaluate exclusionary group norms from a moral point of view. In sum, one important goal of the SRD perspective is to investigate how children and adolescents weigh *moral concerns* about fairness with *group concerns*.

Research from the SRD perspective revealed that children's weighting of moral and group concerns strongly depends on the specific characteristics of the context in which social exclusion takes place (Killen & Rutland, 2011). First, children are more likely to accept hypothetical exclusion in forced-choice contexts than in straightforward contexts. Forced-choice contexts require children to decide between an in- and an out-group member and thus creates stronger ambiguity. In contrast, straightforward situations are less complex as children only decide whether to include an out-group member or not (Brenick & Killen, 2014; Gasser, Malti, & Buholzer, 2014, Theimer, Killen, & Stangor, 2001). Second, hypothetical exclusion based on concerns about group functioning is most likely to occur when the inclusion of the out-group child would negatively affect the attainment of peer group goals (e.g., the group would not be able to solve a difficult math task if a child with academic difficulties joined the group). In contrast, children prioritize moral concerns over concerns about group functioning if the inclusion of the out-group child does not conflict with effective group functioning (Killen & Stangor, 2001; Richardson, Hitti, Mulvey, & Killen, 2014).

Besides the situational context in which social exclusion takes place, age differences play an important role in children's thinking about social exclusion. With age children become increasingly sensitive to situational issues and are more competent in coordinating multiple considerations in their reasoning about peer group exclusion (Killen & Stangor, 2001; Malti, Killen, & Gasser, 2012). For example, in a study by Gasser, Malti and Buholzer (2014) 6-, 9-, and 12-year-old children were asked to predict exclusion of hypothetical children with disabilities in situations which varied according to the disability type of the exclusion target (mental vs. physical disability) and the type of group activity (academic, social, athletic). Results

revealed that older children were more likely than younger children to consider group functioning in situations where inclusion of the child with the disability would have negative impact on effective group functioning (e.g., inclusion of a child with mental disability into an academic group activity compared to a social group activity). These findings suggest an increasing understanding in older children that effective group functioning represents an essential condition that groups can achieve their group goals and interests.

10.1.2 Social Exclusion Based on Academic and Behavior Difficulties

To date few, if any, studies investigated children's reasoning about exclusion of peers with *low academic achievement* and of peers with *hyperactive behavior*. Both children with academic and children with behavioral problems frequently experience social rejection (e.g., Mikami et al., 2015; Wentzel & Asher, 1995). Recent research focuses on how the social context affects these children's victimization and rejection experiences, highlighting the role of stereotypes and peer group norms (Hinshaw & Cicchetti, 2000; Hoza, 2007; Mikami, Lerner, & Lun, 2012). From this perspective, it is important to deepen an understanding of how typically developing children (in-group) think and reason about social exclusion of children with behavioral or academic difficulties (out-groups).

A study by Richardson et al. (2014) investigated adolescents' moral judgments about exclusion of hypothetical peers with aggressive behavior and with low soccer ability. The study showed that adolescents were more likely to accept exclusion from a soccer club if the hypothetical exclusion target was described as aggressive compared to when it was described as having low soccer ability (Richardson et al., 2014). In addition, hypothetical exclusion of a peer with low athletic competence varied as a function of the competitiveness of the soccer club (i.e. more exclusion in competitive than non-competitive clubs), whereas exclusion of an aggressive peer did not depend on the context of exclusion. These findings suggest that children view aggression as highly aversive and thus expect exclusion of these children independently of the peer group context. In contrast, children's exclusion of a bad soccer player is only legitimate in contexts where inclusion would conflict with effective group functioning. Even though these target groups differ from ours, there are important conceptual similarities: Aggression as well as hyperactive behavior are socially aversive behaviors and both low soccer ability and low achievement focus on specific competence deficits. Our study builds on this research by focusing on exclusion of students with hyperactive behavior and low academic achievement. We further extend this study by investigating how classroom-level norms contribute to children's exclusion decisions.

10.1.3 Competitive Classroom Norms and Competitive Individual Attitudes

Recent research highlights the role of group norms in children's social relations and their intergroup attitudes (e.g., Chen et al., 2008; Gasser & Malti, 2012; Mikami et al., 2010; Nipedal, Nesdale, & Killen, 2010). In middle childhood children increasingly attend to group norms and as a consequence, peer groups exert growing influence on children's social interactions (e.g., Abrams, Rutland, & Cameron, 2003; Rubin, Bukowski, & Parker, 1998; Rutland, Cameron, Milne, & McGeorge, 2005). Group norms can be defined as the group members' shared expectations about attitudes, beliefs, and behaviors that group members should display (Nipedal et al., 2010). Several studies support the assumption that classroom or school norms affect children's behavioral socialization (e.g., Henry et al., 2000). For example, Salmivalli and Voeten (2004) related individual attitudes towards bullying and students' expectations of social sanctions of bullying in the classroom (classroom norms) to their individual bullying behavior and found that classroom norms predicted unique variance in bullying behavior, after controlling for individual attitudes. Moreover, research on children's intergroup attitudes revealed that inclusive school norms have positive effects on children's out-group attitudes (Nesdale & Lawson, 2011), especially in contexts where peer groups hold exclusionary norms (McGuire, Rutland, & Nesdale, 2015).

To date, there has been little research to investigate how classroom norms affect children's hypothetical exclusion decisions and reasoning about social exclusion. The present study investigated how competitive norms on the classroom level relate to children's exclusion decisions. We focused on competitive classroom norms because previous research indicated that a competitive intergroup context might enhance negative out-group attitudes (Abrams et al., 2003; McGurie et al., 2015). Therefore, competitive classroom norms may enhance the salience of effective group functioning and relate to higher exclusionary behavior among children. We assessed competitive norms according to the social interdependence theory (Johnson & Johnson, 2009), in which individuals coordinate actions in order to achieve their goals in either positive (cooperative) or negative (competitive) ways. Cooperation exists when the actions of individuals support the attainment of joint goals. In contrast, competition exists when the actions of individuals impede the attainment of each other's goals. Cooperation and competition can be conceptualized as a contextual, relational or individual variable (Roseth, Johnson, & Johnson, 2008). As contextual variables they represent norms that are made salient in the school or classroom setting which might influence children's inclusion and exclusion decisions. Research revealed that cooperative compared to competitive goal structures have a positive effect on

various social outcomes, such as more advanced moral reasoning and prosocial behavior (Tichy, Johnson, Johnson, & Roseth, 2010), more interethnic interactions (Johnson & Johnson, 1981) and less victimization and aggression (Choi, Johnson, & Johnson, 2011).

As an individual variable competitive attitudes may also be expected to relate to children's exclusion decisions. To date, only the study by Richardson et al. (2014) investigated relations between individual competitive attitudes and hypothetical social exclusion. The study revealed that competitive adolescents were more likely to accept exclusion of a bad soccer player from a soccer club than non-competitive adolescents. We extend this study by focusing on academic and social school contexts and by additionally including classroom-level competitive norms.

10.1.4 The Upper Elementary Grades in Switzerland

Most or all of the research on children's understanding of social exclusion focused on general age differences and relied on cross-sectional designs. What has not been studied so far is how children's exclusion decisions and social reasoning relate to specific developmental tasks. The present study included children from the upper elementary grades because these grades represent a critical period with regard to children's wellbeing and academic career in countries such as Switzerland or Germany (Lohaus, Elben, Ball, & Klein-Hessling, 2004). In contrast to the American secondary school system, the Swiss or German system is characterized by "vertical differentiation", (i.e., differentiation between two or three different achievement levels). Upper elementary grade teachers decide on the basis of school tests and grades which secondary level a student will attend. Thus academic performance in the fifth and sixth grade has serious consequences for students' future academic and occupational career. As a consequence, the upper elementary grades are characterized by increasing levels of school distress which might have negative implications for classroom social relationships (Wettstein et al., in press) and students' psychological health (Ball, Lohaus, & Miebach, 2006). Therefore, the upper elementary grades in Switzerland represent an important developmental context to investigate changes in children's thinking about exclusion of students who do not conform to academic and behavioral norms. The present study included two waves of data (fifth and sixth grade), in order to test the hypotheses within a longitudinal design.

10.1.5 Study Design and Hypotheses

This study had two main goals: The first main goal was to investigate how children's exclusion decisions and justification preferences (group functioning vs. fairness) change during the upper elementary grades. The second main goal was to examine how children's individual

competitive attitudes and classroom-level competitive norms shape children's exclusion decisions. Children were presented with four hypothetical situations which required a decision between a child with a difficulty and a child without a difficulty. These situations were varied by difficulty type of the exclusion target (low-achieving vs. hyperactive) and (2) context of exclusion (academic vs. social). Following their decision, children had to select different types of justifications for their decision.

The study included three dependent variables: (1) *Exclusion decisions from the perspective of the story protagonist*, (2) *exclusion decisions from the perspective of self* and (3) *group preference*. We assessed exclusion from two perspectives, because previous research highlighted the importance to assess moral and psychological judgments from both the perspective of others' and the perspective of self (Krettenauer, Malti, & Sokol, 2008; Mulvey & Killen, 2015). Particularly, it has been argued that judgments from the perspective of self may be more likely to measure children's own motives, whereas judgments from the perspective of others are more likely to represent children's understanding about their peers' decisions and motives. The group preference dependent variable represented a difference score between moral- and group-related justifications and therefore indicated how children prioritize considerations about fairness with considerations about effective group functioning.

The study design further included several independent variables which pertained to three different hierarchical levels (level 1: Repeated measures, level 2: Child measures, and level 3: Classroom measure).

The first level (L1) consisted of three *repeated measure variables* which represented a difficulty type (low-achieving vs. hyperactive) x context (academic vs. social) x grade (fifth vs. sixth grade) factorial design. First, we expected that children would be more likely to exclude hyperactive peers than low-achieving peers, because children perceive hyperactive behavior – similar to aggressive behavior – as highly negative (hypothesis 1) (e.g., Hoza et al., 2007). Second, based on previous research (Gasser et al., 2014; Killen & Stangor, 2001), we expected that children would increasingly coordinate the type of difficulty with the context of exclusion as they move from the fifth into the sixth grade (as indicated by a grade x difficulty type x context interaction). More specifically, we hypothesized that children in the fifth grade would differentiate for difficulty type (i.e. would be more likely to exclude hyperactive than low-achieving peers), but would be less likely to consider the context of exclusion. In contrast, we expected that children in the sixth grade would be more likely to exclude low achieving peers in academic compared to social contexts, because of the negative costs for academic group functioning. Still, we expected that in the sixth grade children would strongly exclude

hypothetical peers with hyperactive behavior, independent of the context, because of the negative perception of hyperactive peers. This hypothesis was based on the assumption that increasing academic stress in the upper elementary grades enhances children's sensitivity of how inclusion of peers with academic and behavior difficulties might negatively affect effective group functioning. Therefore, children should more carefully consider the situational context of exclusion as they moved into the sixth grade (hypothesis 2).

At the second level (L2) we further included three *child measures*: Self-rated competitive attitudes and teacher-rated academic and behavior problems. With regard to children's competitive attitudes we expected that the effect of individual competitive attitudes would depend on the situational aspects of social exclusion. More specifically, we hypothesized that children would frequently exclude hyperactive peers, irrespective of their competitive attitudes (hypothesis 3a), because children generally hold negative attitudes towards peers with hyperactive behavior (Hoza, 2007). In contrast, we expected that children with high compared to low competitive attitudes would be more likely to exclude low-achieving peers (hypothesis 3b). We also expected that competitive attitudes would exert stronger influence in academic compared to social group contexts (hypothesis 3c), because competition is more likely to occur in school contexts than during leisure time.

We controlled for students' own academic and behavior difficulties, because previous research revealed that children's group membership influence their judgments about exclusion (e.g., Killen, Henning, Kelly, Crystal, & Ruck, 2007; Malti et al., 2012). On the basis of this research, we controlled for the possibility that typically developing children are more likely to support exclusion compared to low-achieving or hyperactive children, because they have less experience with the harming consequences of social exclusion.

At the third level (L3), we included competitive norms as a *classroom variable*. Peer relation research revealed that hyperactive children often experience social rejection irrespective of classroom norms (Stormshak et al., 1999). In contrast, low-achieving children are more likely to experience social rejection in groups or classrooms where high-achieving norms are salient (Chen, Chang, & He, 2003; Chen, Chang, Liu, & He, 2008; Dijkstra & Gest, 2015). Thus, we expected that children with low achievement would be more likely excluded in classrooms with high competitive norms (hypothesis 4a), but that classroom norms would not significantly predict the exclusion of children with hyperactive behavior (hypothesis 4b). Finally, as for individual attitudes, we expected that competitive classroom norms more clearly relate to social exclusion in the academic than the social context (hypothesis 4c). As children's hypothetical exclusion decision is conceptually closely related to children's preference for group functioning

(Killen & Rutland, 2011), the same hypotheses were tested for group preference as for other- and self-related exclusion decisions.

10.2 Method

10.2.1 Sample

The sample included 1,009 upper elementary school children (50% girls) from Switzerland who were educated in inclusive classrooms (i.e., classrooms with at least one child who received additional assistance from a special needs educator). Children were drawn from 55 classrooms. The study included two waves of data collection: Students were first assessed in the fifth grade (M_{age} = 11.54, SD = 0.56) and again in the sixth grade (M_{age} = 12.58, SD = 0.56). Thirty-nine percent of the participants were of non-Swiss nationality (Kosovo: 21%, Portugal: 11%, Serbia: 10%, Germany: 9%, Italy: 7%, Macedonia: 7%, Turkey: 5%, other nationalities: 30%). The average number of students per classroom was 19.6 at wave one and 20.1 at wave two.

1,209 children participated in the first wave (17% dropout). This dropout was mainly due to seven teachers who declined participation in the second wave. The Little's MCAR test (Little, 1988) was conducted in order to investigate if this dropout was systematic. As the test was significant, for each study variable we investigated if it predicted participation at wave two. Results showed that children who participated in the second wave were more cooperative and less competitive. Moreover, children who referred to group functioning in the social group activity were less likely to participate at the second wave. All other decisions and justification variables did not significantly predict study participation at the second wave.

Parents were informed about the goals of the study and were asked to sign and return a form if they did not want their child to participate. Parent letters were translated into the most common immigrant languages in Switzerland. Participation rate was 99% at wave one and wave two. Student teachers visited the classes for two hours at both time points and used standardized instructions. First, they informed the children about the goals of the study (e.g., how children think about specific social situations) and instructed them that there were no right or wrong answers to the study questions. Moreover, the children were informed about the procedure (e.g., duration, what to do when finished) and they were ensured that their answers would stay anonymous. Children received a student magazine in appreciation of their participation in the study.

10.2.2 Measures

Exclusion decision (other and self). The scenarios were adapted from (citation withheld for blind-review) and have been validated in previous research (citation withheld for blind-review). Children were presented with four social exclusion scenarios which varied according to difficulty type of the hypothetical exclusion target (hyperactive vs. low achieving) and context of exclusion (academic vs. social) at both time points (fifth and sixth grade). Separate versions for boys and girls were used and matched for the child's sex. In the two scenarios about the academic group activity, students have to solve difficult mathematical tasks in groups of three; the protagonist and his friend are looking for someone to complete their group and two children ask to participate (i.e. one with and one without difficulty). In the two scenarios about the social group activity two children have a remaining cinema ticket and again two children ask to be included. In both situations, the group protagonist has to decide whether to include the child with a difficulty or the child without a difficulty. The exclusion target was either described as hyperactive or as low achieving. The descriptions of the difficulties were adapted from research on children's understanding of disabilities (e.g., Smith & Williams, 2005). For example, the academic group activity scenario with a hyperactive exclusion target (a) and the social group activity with a low-achieving exclusion target (b) were described as follows:

(a) "During a math lesson children have to work on difficult tasks in groups of three. Lars and his friend want to work together and are looking for a third child to complete the group. Thomas and Michael both want to join the group. Thomas gets angry easily and has difficulties in sitting quietly. He often interrupts the teacher and talks without being asked. In contrast, Michael has no difficulties to stay quiet and does not get angry quickly."

(b) "Christian and his friend want to go to the cinema in the afternoon. Christian has one remaining cinema ticket and is looking for a third child to join the group. Frank and Peter want to join the group. Frank has academic difficulties. He needs more time and help to complete academic tasks. In contrast, Peter is good at school."

Children were first asked to predict inclusion or exclusion from the perspective of the protagonist ("Who do you think Lars will select?") and then from their own perspective if they were the protagonist ("If you were Lars, how would you decide?").

Group preference. Subsequently, children were asked for their preferences for different types of justifications ("Why would Lars choose Thomas/ Michael?"). The same justification items were used for the two targets (child with and without difficulties), except that the names were replaced. However, the child was directed to respond only to those items which matched

the child's prior decision. For example, if the child chose Michael (the typical child), it was asked why he or she chose Michael. We presented children with four items representing four justification types (moral, group functioning, group identity, or personal) (Killen & Rutland, 2011): (a) "Because it would be unfair otherwise and Thomas/ Michael could be sad" (moral), (b) "Because one cannot work well with Thomas/ Michael" (group functioning), (c) "Because Thomas/ Michael doesn't fit into the group well" (group identity), and (d) "Because everyone can decide on his own with whom to work" (personal). More than one justification could be chosen. To limit the length of the questionnaire, we only assessed justification preferences for exclusion from the perspective of self.

Only moral justification and group functioning showed moderate relations to exclusion decision (r = -.39*** and r = .48***). Moreover, previous research on social exclusion (as outlined above) revealed that the conflict between morality and group functioning is most important to explain children's exclusion decisions, because it reflects how children weight considerations about the harming consequences of exclusion with consideration about necessary conditions that peer groups can achieve their goals (Brenick & Killen, 2014; Gasser et al., 2014; Park & Killen, 2010). In order create a score which represented children's preference for either moral concerns or group functioning, we combined the two justification to a single measure by subtracting moral justifications from group functioning. Therefore a positive score indicated that children prioritized group functioning over moral concerns.

Individual competitive attitudes and competitive classroom norms. The scales to assess competitive and cooperative attitudes were adapted from Johnson and Norem-Hebeisen (1977) and consisted of three items each (e.g., "I like to help other students learn", "I like to do better work than other students"). The scales were measured at both waves. The Cronbach's alphas' were α = .78 (T1) and α = .77 (T2) for cooperative attitudes and α = .71 (T1) and α = .73 (T2) for competitive behavior, respectively. The scales were significantly correlated between wave one and wave two (cooperative attitudes: r = .38***, cooperative attitudes: r = .52***) supporting retest reliability of the scales. As we included the attitudes scales as predictors for children's exclusion decisions we averaged the scales across time. Research revealed that the two scales represent a multidimensional rather than a unidimensional measure and as a consequence the same student may negatively or positively value both competition and cooperation (Johnson & Norem-Hebeisen, 1977). In order to create a score which indicates children's preference for competition over cooperation, we subtracted cooperative attitudes from competitive attitudes. Thus, positive scores indicated preference for competition, whereas negative scores indicated preference for cooperation. The reliability of this difference sore was .75. In order to create a

score for classroom competitive norms, we aggregated children's competitive attitudes at the classroom level. In order to standardize these classroom norms, we centered this variable at the grand-mean of the sample. As we were simultaneously analyzing children's individual competitive attitudes, this variable was centered on the class mean level. This procedure allowed us to disentangle within-class and between-class effects of student's individual competitive attitudes with respective to classroom competitive norms.

Hyperactive Behavior and Academic Achievement. To assess hyperactive behavior, teachers responded to five items on the hyperactivity scale from the SDQ (Strength and Difficulties Questionnaire; Goodman, 1997) for teachers (e.g., "Often loses temper," "Restless, overactive, cannot stay still for long"). The items were answered on a three-point scale (not true, somewhat true, certainly true) and Cronbach's alpha was α = .88 for T1 and α = .85 forT2. Academic performance was measured by three items ("Performing academically at grade level," "Able to read grade level material and answer questions about what he/she has read," "Able to solve grade level math problems") (Hughes, Dyer, Luo, & Kwok, 2009). Teachers responded to these items on a five-point response scale (almost always - almost never). Cronbach's alpha was α = .94 for both T1 and T2. The scales had high retest-reliability (hyperactive behavior: r = .78***, academic achievement: r = .89***) and thus were aggregated across grade.

10.2.3 Data Analytic Approach

The data structure consisted of three levels: (1) The repeated measures, (2) the individual, and (3) the classroom. We analyzed three dependent variables: Two dichotomous exclusion measures (decisions from the perspective of other and self) and one continuous measure (preference for group functioning). For the dichotomous measures, we used hierarchical binary logistic models and for the continuous measure, we used hierarchic linear model. As it is likely that the three repeated measures of a person are more similar within that person than between different children, we first tested for each dependent variable, whether the result depended on characteristics of the child. The *ICC(1)* values that reflect the proportion of the overall variance that is explained by characteristics of the child (Bliese, 2000) were $ICC(1)_{\text{Peers}} = 0.11$ [10], $ICC(1)_{\text{Self}} = 0.13$, $ICC(1)_{\text{Group functioning}} = 0.18$.

Moreover, we investigated whether the children of a specific classroom were more similar in their exclusion decisions and their reasoning than children between different classrooms. Again,

[10] For logistic link models with binary outcomes, the *ICC*(1) is calculated with the formula $\sigma^2 / (\sigma^2 + \pi^2/3)$, as this reflects the variance of a standard logistic distribution (Skrondal & Hesketh, 2004).

we calculated the *ICC(1)* values that express how much of the total variance can be explained by characteristics of the classrooms. This value was only *ICC(1)* = 0.01 percent for each dependent variable; however, as we were analyzing cross-level interactions with predictor variables at the classroom levels, we still included the third level in our analysis. As we also had specific assumptions regarding children's changes in their decisions and reasoning from the fifth to the sixth grade, we tested, whether there was significant variance in these changes between the children. As this was the case for all our dependent variables, we chose a basic model with varying intercepts and slopes represented to analyze our data.

To analyze our data, we used the software HLM, and for each of the three dependent variables, we tested our hypothesis in a stepwise approach. In all analyses, we controlled for teacher-rated hyperactive behavior and academic achievement. Thereby, hyperactive behavior was excluded from all analyses, because none of the effects were significant. Moreover, as sex only significantly predicted group preference (B = 0.06, SE = 0.06, $p < .05$), we present the results of the model without children's sex. Therefore, the final model for each of the three dependent variables (see Table 2) only included significant effects. With regard to the effect sizes of the hypothesized interaction effects, we followed the recommendations of LaHuis et al. (2014) and report the changes in R^2 between two nested models (model with interaction effect as compared to the model without the interaction effect). The two models are derived from an ordinary least square linear regression[11]. The total variance explained is reported for the final model accordingly. Descriptive statistics are displayed in Table 1.

10.3 Results

10.3.1 Exclusion from the Perspective of Other

Level-1: Repeated Measures. The results of the hierarchical binary logistic analysis supported hypothesis 1 (see Table 2): Hyperactive peers were more likely to be excluded than low achieving peers. In line with hypothesis 2, there was a significant three-way interaction between grade, difficulty type of the exclusion target and context of exclusion ($\Delta R^2_{\text{Nagelkerke}}$ = 0.003). In order to better understand the nature of this interaction, we plotted the different slopes following the procedure of Aiken and West (1991). As we conducted multiple slopes tests for each hypothesis, ,we applied the Bonferroni correction to adjust the alpha level to the number of simple slope analyses that were used to test a specific hypothesis. Figure 1 shows that, over time,

[11] Although OLS will produce biased standard errors for regression coefficients in a multilevel data structure, the coefficients themselves are not biased, and thus the R^2 is neither.

low-achieving peers were increasingly excluded in the academic context (B = 0.85, SE = 0.12, p < .001, OR = 2.34, CI(95%) = 1.87, 2.93), but not in the social context. Thereby, low achieving peers were twice as likely to be excluded from a math task in the sixth grade as in the fifth grade, as the odds ratio indicates. In contrast, hyperactive peers were more likely excluded over time (academic context: B = 0.46, SE = 0.15, p = .003, OR = 1.59, CI(95%) = 1.18, 2.14; social context: B = 0.63, SE = 0.16, p < .001, OR = 1.89, CI(95%) = 1.39, 2.57), but their probability for being excluded was independent of the context (fifth grade: B = -0.06, SE = 0.14, p = .68; sixth grade: B = 0.12, SE = 0.16, p = .47) (see Figure 1). Consequently, these findings support hypothesis 2, that – over time – children would increasingly coordinate the type of difficulty of the exclusion target with the context of exclusion.

Level 2: Child measures. The findings (see Table 2) further showed that exclusion not only depended on the context of exclusion and type of difficulty of the exclusion target, but also on the individual competitive attitudes of the child. A significant two-way interaction between difficulty type and individual competitive attitudes ($\Delta R^2_{\text{Nagelkerke}}$ = 0.002) and the subsequent slopes tests indicated that, in line with hypothesis 3a, exclusion of hyperactive peers was independent of individual competitive attitudes (B = -0.12, SE = 0.07, p = .10) (see Figure 2). In contrast, individual competitive attitudes significantly predicted exclusion if the exclusion target was low-achieving (B = 0.17, SE = 0.06, p = .002 OR = 1.19, CI(95%) = 1.06, 1.33), supporting hypothesis 3b (see Figure 2). Hypothesis 3c was not supported, as the effect of individual competitive attitudes on children's exclusion decisions was not moderated by the context of exclusion (see Table 2). Finally, teacher-reported academic achievement significantly predicted social exclusion (see Table 2): Children with higher academic achievement were more likely to exclude hypothetical peers with difficulties.

Level-3: Classroom Measure. No significant effects of competitive classroom norms were found (see Table 2); thus, hypotheses 4a, 4b, and 4c were not supported.

10.3.2 Exclusion from the Perspective of Self

Level-1: Repeated Measures. In line with hypothesis 1 we found that hyperactive peers were more likely to be excluded than low-achieving peers (see Table 2). The analysis further revealed a significant three-way interaction between grade, type of difficulty and context ($\Delta R^2_{\text{Nagelkerke}}$ = 0.002). The plot of this interaction (see Figure 3) and the results of subsequent simple slopes analyses suggest that peers with low-achievement were less frequently excluded in the social context over time (B = -0.46, SE = 0.10, p < .001, OR = 0.63, CI(95%) = 0.52, 0.77). Furthermore, while children in the fifth grade did not differentiate between the context, children

in the sixth grade were less likely to exclude low-achieving targets in the social context than in the academic context (B = -0.44, SE = 0.10, p < .001, OR = 0.64, CI(95%) = 0.53, 0.78). In contrast, exclusion of peers with hyperactive behavior was high, independent of context (fifth grade: B = -0.18, SE = 0.12, p = .13; sixth grade: B = 0.03, SE = 0.12, p = .81), and did not significantly change over time (academic context: B = -0.10, SE = 0.12, p = .40; social context: B = 0.10, SE = 0.12, p = .39). Taken together, these findings support hypothesis 2 that children increasingly coordinated type of difficulty with context of exclusion.

Level 2: Child Measures. Children's competitive attitudes significantly predicted their exclusion decisions ($\Delta R^2_{\text{Nagelkerke}}$ = 0.004): Supporting hypothesis 3a and 3b, children with higher competitive attitudes were more likely to exclude low-achieving peers than children with low competitive attitudes (B = 0.38, SE = 0.06, p < .001, OR = 1.47, CI(95%) = 1.31, 1.64), but did not differ with regard to hypothetical peers with hyperactive behavior (B = 0.01, SE = 0.06, p = .95) (see Figure 4a). Hypothesis 3c that individual competitive attitudes would predict higher exclusion in academic contexts was not supported (see Table 2).

Level-3: Classroom Measure. Classroom-level norms significantly predicted exclusion according to the difficulty type of the excluded peer ($\Delta R^2_{\text{Nagelkerke}}$ = 0.002) (see Figure 4b). In support of hypothesis 4a, simple slope tests revealed that classroom competitive attitudes predicted exclusion only if the exclusion target was low-achieving (B = 0.77, SE = 0.18, p < .001, OR = 2.17, CI(95%) = 1.51, 3.10). In particular, in classrooms that were one standard deviation above the mean level of competitive classroom norms, peers with low academic achievement were more than twice as likely to be excluded compared to classrooms that were less competitive than average. In contrast, exclusion of hyperactive peers was independent of individual or classroom competitive attitudes (B = -0.02, SE = 0.20, p = .93), supporting hypothesis 4b. However, hypothesis 4c was not supported, as there was no significant interaction of classroom norms and context of exclusion (see Table 2).

10.3.3 Preference for Group Functioning

Level-1: Repeated measures. We further analyzed children's preferences for group functioning as compared to their preferences for moral justifications. Consistent with hypothesis 1, children showed higher preferences for group functioning in situations with a hyperactive exclusion target than in situations with low achieving exclusion target (see Table 2). Moreover, similarly to the results for children's exclusion decisions, there was a significant three-way interaction between grade, difficulty type and context of exclusion (ΔR^2 = 0.001). Figure 5 and the respective simple slopes tests showed that, while children in the fifth grade did not

differentiate between the context for low achieving peers (B = -0.04, SE = 0.03, p = .13), children in the sixth grade were less likely to prefer group functioning in the social context than in the academic context when the exclusion target was low-achieving (B = -0.08, SE = 0.03, p = .005). In contrast, children in the sixth grade did not differentiate between contexts for hyperactive exclusion targets (B = 0.02, SE = 0.03, p = .58). However, and contrary to hypothesis 2, children in the fifth grade were more likely to justify the exclusion of peers with hyperactive behavior with considerations of group functioning in the academic than in the social context (B = -0.10, SE = 0.03, p <. 001). Thus, hypothesis 2 was only partially confirmed.

Level 2: Child Measures. In line with hypothesis 3a and 3b, a significant interaction between individual competitive attitudes and difficulty type (ΔR^2 = 0.002) and the subsequent slopes tests revealed that individual competitive attitudes predicted group functioning only if the exclusion target was low-achieving (B = 0.12, SE = 0.02, p < .001) (see Figure 6a). Furthermore, individual competitive attitudes significantly predicted preference for group functioning (ΔR^2 = 0.001) in the academic (B = 0.12, SE = 0.02, p < .001) and the social context (B = 0.08, SE = 0.02, p < .001), whereby Figure 7a suggests, that this effect was stronger for the academic context. Thus, hypothesis 3c was supported.

In addition, the analysis revealed a significant positive effect of teacher-reported academic achievement on children's preference for group functioning (see Table 2).

Level-3: Classroom Measure. Classroom-level competitive norms significantly interacted (ΔR^2 < 0.001) with the difficulty type of the exclusion target (see Table 2), whereby low-achieving peers were more likely to be excluded in classrooms with competitive norms than in classrooms with less competitive norms (B = 0.22, SE = 0.06, p < .001), while classroom norms did not predict the exclusion of hyperactive peers (B = 0.11, SE = 0.06, p = .09) (see Figure 6b). These findings support hypotheses 4a and 4b. Consistent with hypothesis 4c, a two-way interaction between classroom-level competitive norms and context of exclusion (ΔR^2 = 0.001) and the respective interaction plot (see Figure 7b) with the slopes tests revealed that competitive classroom norms only significantly and positively predicted group functioning in the academic context (B = 0.22, SE = 0.06, p < .001) while no significant associations between competitive classroom norms and group preferences were found for the social context (B = 0.01 SE = 0.06, p = .86).

10.4 Discussion

The present study is the first to compare children's thinking about the exclusion of children with low-academic abilities and hyperactive behavior in two different contexts (academic vs.

social). The results of this study indicate that, overall, the hyperactive peer was more excluded than the low-achieving peer. Moreover, children were more likely to prioritize effective group functioning over moral concerns if the exclusion target was hyperactive than if it was low-achieving.

These findings parallel previous research indicating that typically developing children hold negative attitudes towards hyperactive peers (e.g., Harnum, Duffy, & Fergusion, 2007; Hoza, 2007). For example, 11-12-year old children often attribute negative characteristics (e.g., careless, crazy) and avoid to engage with them in social or academic activities (Law, Sinclair, & Fraser, 2007). One possible explanation for these findings is that typically developing children view hyperactive behaviors such interrupting others, making noises or fidgeting as disruptive and as conflicting with the smooth and effective functioning of social interactions. Hyperactive children also display higher rates of aggressive behavior such as teasing or hitting, and as a consequence, peer problems arise quickly (Hoza, 2007). In contrast to hyperactive behavior, low achievement is not directly associated with social competence deficits and does not generally have negative consequences for peer group activities.

A second explanation for children's negative views of hyperactive children may lie in their social-cognitive conceptions about disabilities. 11-12-year old children strongly explain hyperactive behavior through social and psychological causes and belief that these behaviors are controllable. In contrast, they explain learning disabilities with biological causes and view them as less controllable (Smith & Williams, 2005). In conclusion, children ascribe more intentionality and responsibility to children who show hyperactive behavior compared to children who perform low in school.

Extending previous research on intergroup exclusion, the design of our study included two waves, which allowed us to longitudinally investigate children's thinking about social exclusion. As hypothesized, the coordination of difficulty type of exclusion target (low-achieving vs. hyperactive) and exclusion context (academic vs. social) increased when children moved from the fifth to the sixth grade. Children in the fifth grade differentiated between difficulty type (e.g., higher levels of exclusion of the hyperactive compared to the low-achieving peer), but did not consistently consider the context of exclusion. Children in the sixth grade more carefully evaluated if inclusion of the low-achieving peer would negatively impacts on academic group functioning. More, specifically, children in the sixth grade expected more exclusion of the low-achieving peer in the academic compared to the social context. In contrast, exclusion of the hyperactive peer was nearly independent of the context (academic vs. social).

These findings support previous research showing that, with age, children and adolescents increasingly consider the specific characteristics of the peer group context (Gasser et al., 2014; Killen & Rutland, 2011; Killen & Stangor, 2001; Nucci & Turiel, 2009). For example, 12-years old children were more likely than 6- or 9-years old children to consider if inclusion of a child with a specific disability (mental vs. physical) negatively affects different types of group activities (cognitive, social, athletic). Similarly, seventh graders, as compared to fourth or first graders, were more likely to differentiate between situations where inclusion of an out-group member would have negative consequences for effective group functioning (Killen & Stangor, 2001). These findings have been explained by children's growing executive and reflective capacities which allow them to consider multiple considerations simultaneously and to respond to moral conflicts in more specific ways (Richardson, Mulvey, & Killen, 2012). Moreover, during late childhood and early adolescence, peer relationships increase in significance, whereby older children and early adolescents become more sensitive to group concerns than younger children. This developmental trend may explain why older children and early adolescents frequently refer to stereotypes and group concerns in peer exclusion contexts (Killen & Rutland, 2011; Richardson et al., 2014).

Previous research mainly focused on general age effects and did not specifically investigate children's social and moral reasoning with regard to specific developmental tasks, such as coping with the academic pressure during the upper elementary grades. Little is known about the social costs of these increasing levels of academic stress during that period. During the two upper elementary school years in Switzerland, teachers decide about students' assignment to different secondary school types with different achievement levels. As these different academic levels of secondary school closely relate to children's opportunities for participating in higher education, these decisions are highly significant for children's future academic and occupational career. Previous research has shown that upper elementary grade students from Germany experience growing levels of internalizing and externalizing behaviors (Lohaus et al., 2004). Moreover, a recent study from Switzerland revealed that students in the sixth grade reported more student misbehavior, more teacher aggression and less supportive classroom relationships than students from the fifth grade (Wettstein et al., in press). Therefore, our finding that children's coordination of difficulty type and context increased as children moved to the sixth grade may indicate that children are increasingly sensitive to possible conflicts between academic and social goals during the upper elementary grades.

Independently from grade when children were assessed, exclusion from the perspective of self was much lower than exclusion from the perspective of other (62% vs. 80%). Children's

tendency to expect less exclusion from the perspective of self than from the perspective of other was also found in previous research (e.g., Mulvey & Killlen 2015) and reflects the well-known social psychological phenomenon, according to which individuals tend to see themselves in a more positive light in order to avoid cognitive dissonance (Festinger, 1957). Therefore, teachers should take this discrepancy into consideration when discussing peer group conflicts with their students. In order to enhance children's ability to critically reflect on their own decisions and motivations for social exclusion, it is important that teachers systematically relate social and moral discussions to children's life and personal experiences of peer group exclusion (Nucci, 2009).

One of the main results of our study was that classroom-level competitive norms predicted exclusion and justification preferences beyond and above individual competitive attitudes. These findings are consistent with previous research indicating that peer group or classroom norms predict children's or adolescents' prosocial or aggressive behavior (e.g., Henry et al., 2000; Stormshak et al., 1999). For example, a short-term longitudinal study showed that individual and classroom-level normative beliefs about relational aggression predicted relational aggression 1 year later in late childhood and early adolescence (Werner & Hill, 2010). However, most of this research focused on social behavioral norms (e.g., aggregated aggressive or prosocial behavior) and did not include academic norms such as classmates' preferences for academic competition or cooperation.

Research on the basis of social interdependence theory provides strong support that teachers can influence children's social relationship and classroom climate through different learning instructions (Roseth et al., 2008). For example, a cooperative learning setting resulted in more cross-group interactions between children with and without special educational needs compared to children who received competitive instructions. Moreover, children who experienced cooperative learning were more likely to show intergroup helping behavior and intergroup sympathy in inclusive classrooms compared to children who worked in competitive settings (Johnson & Johnson, 1982). Therefore, social acceptance or rejection of children with special educational needs may depend on whether teachers use cooperative or competitive learning instructions.

Our study also showed that children's competitive attitudes showed stronger and more consistent relationships with social exclusion than classroom-level competitive attitudes. This is not surprising, because individual goals are more proximal predictors for children's motivation and behavior than classroom-level goals (Meece, Anderman, & Anderman, 2006). Future

research is necessary to investigate how classroom-level characteristics (e.g., classroom climate) contribute to the development of individual competitive and cooperative attitudes.

As expected, effects of classroom-level and individual competitive attitudes were context-specific. First, classroom-level competitive norms predicted preference for group functioning only in the academic context and not in the social context. Second, the negative effects of classroom-level and individual competitive attitudes were higher for exclusion of the low-achieving peer than exclusion of the hyperactive peer. Exclusion of the hyperactive peer was less likely to depend on competitive attitudes and classroom norms. Again, this finding indicates that exclusion of hyperactive peers is less likely to depend on social-contextual factors than exclusion of low-achieving peers. This does not mean that the group level is irrelevant for social inclusion of hyperactive children. However, our results might suggest that social rejection of hyperactive children is more difficult to address and that individual social skills training should be combined with group-level interventions (Killen & Malti, 2015).

Finally, we found that teacher-rated academic achievement predicted social exclusion and preferences for effective group functioning. Previous research revealed that children who conform to the stereotype (i.e., belong to the majority group) are more likely to accept intergroup exclusion compared to peers who do not conform the stereotype (i.e. belong to the minority group) (Killen & Rutland, 2011). For example, Swiss adolescents are more likely support exclusion based on nationality than Non-Swiss adolescents (Malti et al., 2012). Our results similarly revealed that children who perform well at school are more supportive of social exclusion than their peers who fail to conform to academic school norms.

10.4.1 Limitations

The study has several limitations: First, the study included only two waves. More extensive longitudinal studies, which include several measurement points, are necessary to reveal a more comprehensive picture about how children balance social and academic goals with regard to the social exclusion of children who do not conform to relevant school norms. Second, analyses on sample attrition revealed that children from competitive classrooms were more likely to drop out which might have resulted in biased estimations. Third, the present study did not differentiate between different peer groups within classrooms. Peer groups may differ to the degree they identify with competitive or cooperative group norms. Therefore, it is important for future research to investigate how affiliation with specific peer groups influences children's judgments and social reasoning about intergroup exclusion. Moreover, competitive classroom norms represent only one aspect of children's social environment that might influence their thinking

about social exclusion of peers with academic and behavior difficulties. Other social-contextual variables such as children's intergroup friendships (i.e. friendships between children with and without difficulties) (e.g., Killen & Rutland, 2011) or teachers' attitudes or feedback towards children with difficulties or disabilities might also relate to children's exclusion decisions (e.g., White & Jones, 2000). Forth, our study focused on hypothetical situations and not on real-life contexts. The use of hypothetical scenarios is the most common methodology within moral psychology. It allows to systematically vary situational characteristics and to standardize the conditions across participants. Moreover, interviews or questionnaires about hypothetical situations allow for insights into children's motives for their (im)moral actions. Even though previous research revealed that children's thinking about hypothetical moral conflicts is related to their social behavior (e.g., Malti & Krettenauer, 2013), one cannot expect a direct link between hypothetical and real-life exclusion. In particular, in addition to children's social reasoning, other social competencies (e.g., emotions such as empathy) may also influence children's decisions in real situations.

10.4.2 Conclusions

Despite these limitations, the study was the first to investigate how classroom-level and individual competitive attitudes relate to children's exclusion decisions and social reasoning low-achieving and hyperactive peers. Moreover, the findings provide insights into how children's exclusion decisions change before the transition from elementary to secondary school. The study is based on a longitudinal design and therefore extends previous research on intergroup exclusion which mostly relied on cross-sectional data (e.g., Killen & Rutland, 2011). Most of the research on moral development focuses on the individual. More research using a contextual analytical approach to moral development is necessary to extend our knowledge about how classmates or teachers contribute to children's moral development, (e.g., Gasser & Malti, 2012).

Finally, our results allow conclusions about how teachers might promote inclusive peer behavior among their students. Our study shows that competitive classroom norms relate to children's exclusion decisions. Therefore, teachers who structure students' academic goals cooperatively might be expected to contribute to students' inclusive orientations. Recent social-emotional prevention and intervention research emphasized the importance to use teaching strategies which serve both academic and social goals (Jones, Brown, & Aber, 2011; Nucci, 2009). Cooperative learning promotes supportive peer relationships as well as students' academic achievement (Johnson & Johnson, 2009). In contrast, teachers who promote competition disentangle academic and social learning (Roseth et al., 2008). As a consequence,

peer interactions are excluded from the classroom and are transferred to hallways, canteens and home way. In these non-academic contexts children may lack the experience of positive adult models and instructions about how to relate to each other without excluding those who do not conform to academic and behavior school norms.

References

Abrams, D., Rutland, A., & Cameron, L. (2003). The development of subjective group dynamics: Children's judgments of normative and deviant in-group and out-group individuals. *Child Development*, *74*, 1840-1856. doi: 10.1046/j.1467-8624.2003.00641.x

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks: Sage.

Ball, J., Lohaus, A., & Miebach, C. (2006). Psychische Anpassung und schulische Leistungen beim Wechsel von der Grundschule zur weiterführenden Schule [Psychological adjustment and school achievement during transition from elementary to secondary school]. *Zeitschrift für Entwicklungspsychologie und Pädagogische Psychologie, 38*, 101-109. doi: 10.1026/0049-8637.38.3.101

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 349–381). San Francisco: Jossey-Bass.

Brenick, A., & Killen, M. (2014). Moral judgments about Jewish–Arab intergroup exclusion: The role of cultural identity and contact. *Developmental Psychology*, *50*, 86-99. doi: 10.1037/a0034702

Chen, X, Chang, L., & He, Y. (2003). The peer group as a context: Mediating and moderating effects on relations between academic achievement and social functioning in Chinese children. *Child Development, 74*, 710–727. doi:10.1111/1467-8624.00564

Chen, X., Chang, L., Liu, H., & He, Y. (2008). Effects of the peer group on the development of social functioning and academic achievement: A longitudinal study in Chinese children. *Child Development*, *79*, 235–251. doi:10.1111/j.1467-8624.2007.01123.x

Choi, J., Johnson, D. W., & Johnson, R. (2011). Relationships among cooperative learning experiences, social interdependence, children's aggression, victimization, and prosocial behaviors. *Journal of Applied Social Psychology*, *41*, 976–1003. doi:10.1111/j.1559-1816.2011.00744.x

Dijkstra, J. K., & Gest, S. D. (2015). Peer norm salience for academic achievement, prosocial behavior, and bullying: Implications for adolescent school experiences. *Journal of Early Adolescence, 35*, 79–96. doi:10.1177/0272431614524303.

Estell, D. B., Jones, M. H., Pearl, R. A., Van Acker, R., Farmer, T. W., & Rodkin, P. R. (2008). Peer groups, popularity, and social preference: Trajectories of social functioning among

students with and without learning disabilities. *Journal of Learning Disabilities, 41*, 5–14. doi:10.1177/0022219407310993

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.

Gasser, L., & Malti, T. (2012). Children's and their friends' moral reasoning: Relations with aggressive behavior. *International Journal of Behavioral Development*, *36*, 358-366. doi:10.1177/0165025412448353

Gasser, L., Malti, T., & Buholzer, A. (2014). Swiss children's moral and psychological judgments about exclusion of children with disabilities. *Child Development, 85*, 532–548. doi:10.1111/cdev.12124

Goodman, R. (1997). The strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry, 38*, 581–586. doi:10.1111/j.1469-7610.1997.tb01545.x

Harnum, M., Duffy, J., & Ferguson, D. A. (2007). Adults' versus children's perceptions of a child with autism or attention deficit hyperactivity disorder. *Journal of Autism and Developmental Disorders*, *37*, 1337-1343. doi: 10.1007/s10803-006-0273-0

Henry, D., Guerra, N., Huesmann, R., Tolan, P., VanAcker, R., & Eron, L. (2000). Normative influences on aggression in urban elementary school classrooms. *American Journal of Community Psychology*, *28*, 59-81. doi: 10.1023/A:1005142429725

Hinshaw, S. P., & Cicchetti, D. (2000). Stigma and mental disorder: Conceptions of illness, public attitudes, personal disclosure, and social policy. *Development and Psychopathology, 12*, 555–598. http://dx.doi.org/10.1017/S0954579400004028

Hoza, B. (2007) Peer functioning in children with ADHD. *Journal of Pediatric Psychology, 32*, 655–663. doi:10.1093/jpepsy/jsm024

Hughes, J. N., Dyer, N., Luo, W., & Kwok, O. M. (2009). Effects of peer academic reputation on achievement in academically at-risk elementary students. *Journal of Applied Developmental Psychology*, *30*, 182–194. doi:10.1016/j.appdev.2008.12.008

Johnson, D. W., & Johnson, R. T. (1981). Effects of cooperative and individualistic learning experiences on interethnic interaction. *Journal of Educational Psychology*, *73*, 444. doi:10.1037/0022-0663.73.3.444

Johnson, R. T., & Johnson, D. W. (1982). Effects of cooperative and competitive learning experiences on interpersonal attraction between handicapped and nonhandicapped students. *The Journal of Social Psychology*, *116*, 211–219. doi:10.1080/00224545.1982.9922773

Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. *Educational Researcher*, *38*, 365–379. doi:10.3102/0013189X09339057

Johnson, D. W., & Norem-Hebeisen, A. (1977). Attitudes toward interdependence among persons and psychological health. *Psychological Reports*, *40*, 843–850. doi:10.2466/pr0.1977.40.3.843

Jones, S. M., Brown, J. L., & Lawrence Aber, J. (2011). Two-year impacts of a universal school-based social-emotional and literacy intervention: An experiment in translational developmental research. *Child Development*, *82*, 533-554. doi: 10.1111/j.1467-8624.2010.01560.x

Killen, M., Elenbaas, L., & Rutland, A. (2015). Balancing the fair treatment of others while preserving group identity and autonomy. *Human Development, 58,* 253-272. doi: 10.1159/000444151

Killen, M., Henning, A., Kelly, M., Crystal, D., & Ruck, M. (2007). Evaluations of interracial peer encounters by majority and minority U.S. children and adolescents. *International Journal of Behavioral Development, 31,* 491–500. doi:10.1177/0165025407081478

Killen, M., & Malti, T. (2015). Moral judgments and emotions in contexts of peer exclusion and victimization. *Advances in Child Development and Behavior, 48*, 249–276. doi:10.1016/bs.acdb.2014.11.007

Killen, M., & Rutland, A. (2011). *Children and social exclusion: Morality, prejudice and group identity*. Oxford, England: Wiley-Blackwell. doi:10.1002/9781444396317

Killen, M., & Stangor, C. (2001). Children's reasoning about social inclusion and exclusion in gender and race peer group contexts. *Child Development, 72*, 174–186. doi:10.1111/1467-8624.00272

Krettenauer, T., Malti, T., & Sokol, B. (2008). The development of moral emotions and the happy victimizer phenomenon: A critical review of theory and applications. *Developmental Science, 2*, 221–235. doi:10.3233/DEV-2008-2303

LaHuis D., Hartman M.J., Hakoyama S., and Clark P.C (2014). Explained variance measures for multilevel models. *Organizational Research Methods, 17* 1-19. doi: 10.1177/10944 28114541701

Law, G. U., Sinclair, S., & Fraser, N. (2007). Children's attitudes and behavioural intentions towards a peer with symptoms of ADHD: Does the addition of a diagnostic label make a difference? *Journal of Child Health Care, 11*, 98–111. doi:10.1177/1367493507076061

Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*, 1198–1202. doi: 10.2307/2290157

Lohaus, A., Elben, C., Ball, J., & Klein-Hessling, J. (2004). School transition from elementary to secondary school: Changes in psychological adjustment. *Educational Psychology*, *24*, 161–173. doi:10.1080/0144341032000160128

Malti, T., Killen, M., & Gasser, L. (2012). Social judgments and emotion attributions about exclusion in Switzerland. *Child Development, 83*, 697–711. doi:10.1111/j.1467-8624.2011.01705.x

Malti, T., & Krettenauer, T. (2013). The role of moral emotion attributions in children's and adolescents' prosocial and antisocial behavior: A meta-analysis. *Child Development, 84*, 397–412. doi:10.1111/j.1467-8624. 2012.01851.x

McGuire, L., Rutland, A., & Nesdale, D. (2015). Peer group norms and accountability moderate the effect of school norms on children's intergroup attitudes. *Child Development*, *86*, 1290-1297. doi: 10.1111/cdev.12388

Meece, J. L., Anderman, E. M., & Anderman, L. H. (2006). Classroom goal structure, student motivation, and academic achievement. *Annual Review of Psychology*, *57*, 487–503. doi:10.1146/annurev.psych.56.091103.070258

Mikami, A. Y., Hoza, B., Hinshaw, S. P., Arnold, L. E., Hechtman, L., & Pelham, W. E. (2015). Cross-situational correspondence of sociometric nominations among children with ADHD. *Journal of Emotional and Behavioral Disorders, 23*, 52–64. doi:10.1177 /1063426613518244

Mikami, A. Y., Lerner, M. D., & Lun, J. (2010). Social context influences on children's rejection by their peers. *Child Development Perspectives*, *4*, 123-130. doi: 10.1111/j.1750-8606.2010.00130.x

Mulvey, K. L., & Killen, M. (2015). Challenging gender stereotypes: Resistance and exclusion. *Child Development*, *86*, 681–694. doi:10.1111/cdev.12317

Nesdale, D., & Lawson, M. J. (2011). Social groups and children's intergroup attitudes: Can school norms moderate the effects of social group norms? *Child Development, 82*, 1594–1606. doi:10.1111/j.1467-8624.2011.01637.x

Nipedal, C., Nesdale, D., & Killen, M. (2010). Social group norms, school norms, and children's aggressive intentions. *Aggressive behavior*, *36*, 195-204. doi: 10.1002/ab.20342

Nucci, L. (2009). *Nice is not enough: Facilitating moral development*. Upper Saddle River, NJ: Pearson.

Nucci, L. & Turiel, E. (2009). Capturing the complexity of moral development and education. *Mind, Brain, and Education*, *3*, 151–159. doi:10.1111/j.1751-228X.2009.01065.x

Park, Y., & Killen, M. (2010). When is peer rejection justifiable? Children's understanding across two cultures. *Cognitive Development, 25*, 290–301. doi:10.1016/ j.cogdev.2009.10.004

Richardson, C. B., Hitti, A., Mulvey, K. L., & Killen, M. (2014). Social exclusion: The interplay of group goals and individual characteristics. *Journal of Youth and Adolescence, 43*, 1281–1294. doi:10.1007/s10964-013-9967-8

Richardson, C., Mulvey, K. L., & Killen, M. (2012). Extending social domain theory with a process-based account of moral judgments. *Human Development, 55*, 4–25. doi:10.1159/000335362

Roseth, C. J., Johnson, D. W., & Johnson, R. T. (2008). Promoting early adolescents' achievement and peer relationships: The effects of cooperative, competitive, and individualistic goal structures. *Psychological Bulletin, 134*, 223–246. doi:10.1037/0033-2909.134.2.223

Rubin, K., Bukowski, W., & Parker, J. (1998). Peer interactions, relationships, and groups. In N. Eisenberg, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development, 6th ed.* (pp. 571–645). New York, NY: John Wiley & Sons Inc.

Rutland, A., Cameron, L., Milne, A., & McGeorge, P. (2005). Social norms and self-presentation: Children's implicit and explicit intergroup attitudes. *Child Development, 76,* 451–466. doi:10.1111/j.1467-8624.2005.00856.x

Rutland, A., & Killen, M. (2015). A developmental science approach to reducing prejudice and social exclusion: Intergroup processes, social-cognitive development, and moral reasoning. *Social Issues and Policy Review, 9,* 121-154. doi: 10.1016/bs.acdb.2016.04.004

Salmivalli, C., & Voeten, M. (2004). Connections between attitudes, group norms, and behavior in bullying situations. *International Journal of Behavioral Development, 28*, 246–258. doi: 10.1080/01650250344000488

Skrondal, A. and Rabe-Hesketh, S. (2004). *Generalized Latent Variable Modeling: Multilevel, Longitudinal and Structural Equation Models*. Boca Raton, FL: Chapman & Hall/CRC.

Smith, L. A. & Williams, J. M. (2005). Development differences in understanding the causes, controllability and chronicity of disabilities. *Child: Care, Health & Development, 31*, 479-488. doi: 10.1111/j.1365-2214.2005.00532.x

Stormshak, E. A., Bierman, K. L., Bruschi, C., Dodge, K. A., & Coie, J. D. (1999). The relation between behavior problems and peer preference in different classroom contexts. *Child Development*, *70*, 169–182. doi:10.1111/1467-8624.00013

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks-Cole.

Tichy, M., Johnson, D. W., Johnson, R. T., & Roseth, C. J. (2010). The impact of constructive controversy on moral development. *Journal of Applied Social Psychology*, *40*, 765–787. doi:10.1111/j.1559-1816.2010.00597.x

Theimer, C. E., Killen, M., & Stangor, C. (2001). Young children's evaluations of exclusion in gender-stereotypic peer contexts. *Developmental Psychology, 37*, 18–27. doi:10.1037/ 0012-1649.37.1.18

Turiel, E. (1998). Moral development. In N. Eisenberg, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology*: *Vol. 3. Social, emotional, and personality development, 5th ed.* (pp. 863–932). New York, NY: Wiley & Sons Inc.

Welsh, M., Parke, R. D., Widaman, K., & O'Neil, R. (2001). Linkages between children's social and academic competence: A longitudinal analysis. *Journal of School Psychology, 39*, 463–481. doi:10.1016/S0022-4405(01)00084-X

Wentzel, K. R., & Asher, S. R. (1995). The academic lives of neglected, rejected, popular, and controversial children. *Child Development*, *66*, 754–763. doi:10.1111/j.1467-8624.1995.tb00903.x

Werner, N. E., & Hill, L. G. (2010). Individual and peer group normative beliefs about relational aggression. *Child Development*, *81*, 826–836. doi:10.1111/j.1467-8624.2010.01436.x

Wettstein, A., Ramseier, E., & Marion Scherzinger, M. (in press). Eine konfirmatorische Mehrebenen-Faktorenanalyse zur Schülerwahrnehmung von Störungen im Unterricht der Klassen- und einer Fachlehrperson [A confirmatory mulitlevel-factor analysis on students' perceptions of classroom disruptive behavior]. Psychologie in Erziehung und Unterricht.

White, K. J., & Jones, K. (2000). Effects of teacher feedback on the reputations and peer perceptions of children with behavior problems. *Journal of Experimental Child Psychology, 76*, 302–326. doi.org/10.1006/jecp.1999.2552

Table 1

Percentage of frequency of exclusion decisions and mean (SD) of group preference by grade, difficulty type, and context

	Low-achieving		Hyperactive		Total
	Academic	Social	Academic	Social	
Exclusion other (%)					
5th grade	68	64	87	86	76
6th grade	82	65	91	92	83
Total	75	65	89	89	80
Exclusion self (%)					
5th grade	44	47	82	79	63
6th grade	47	38	79	80	61
Total	46	42	80	79	62
Group preference (*M, SD*)					
5th grade	-.05 (.78)	-.09 (.72)	.49 (.70)	.38 (.73)	.18 (.77)
6th grade	-.02 (.74)	-.10 (.66)	.44 (.70)	.46 (.67)	.20 (.74)
Total	-.03 (.76)	-.09 (.69)	.46 (.70)	.42 (.70)	.19 (.75)

Table 2

Parameter estimates (standard errors) of independent variables on exclusion decisions and group preference: Three-level hierarchical modeling

	Other		Self		Group preference	
	Estimate (*SE*)	*z* value	Estimate (*SE*)	*z* value	Estimate (*SE*)	*z* value
Intercept	0.78 (.08)	9.68***	-0.26 (.08)	-3.46***	-0.04 (.03)	-1.75
L1 (Repeated measures)						
Grade (G)	0.85 (.11)	7.39***	0.11 (.10)	1.08	0.03 (.03)	0.86
Difficulty (D)	1.23 (.12)	10.10***	1.87 (.11)	16.88***	0.53 (.03)	19.33***
Context (C)	-1.19 (.10)	-1.85	0.13 (.10)	1.35	-0.04 (.03)	-1.51
G*D	-0.39 (.19)	-2.07*	-0.21 (.15)	-1.37	-0.08 (.04)	-1.99*
G*C	-0.76 (.15)	-5.12***	-0.57 (.14)	-4.12***	-0.04 (.04)	-1.03
D*C	0.13 (.17)	0.75	-0.31 (.15)	-2.01*	-0.06 (.04)	-1.55
G*D*C	0.94 (.26)	3.60***	0.77 (.22)	3.59***	0.16 (.05)	2.89**
L2 (Child measures)						
Achievement	0.21 (.04)	5.54***	-	-	0.03 (.01)	2.66**
Competitive Attitudes (CA)	0.17 (.06)	3.07**	0.38 (.06)	6.75***	0.12 (.02)	6.37***
D*CA	-0.29 (.08)	-3.60***	-0.38 (.07)	-5.50***	-0.08 (.02)	-4.54***
C*CA	-	-	-	-	-0.04 (.02)	-2.33*
L3 (Classroom Measure)						
Classroom Norm (CN)	-	-	0.77 (.18)	4.32***	0.22 (.06)	3.54***
D*CN	-	-	-0.79 (.22)	-3.64***	-0.11 (.05)	-2.10*
C*CN	-	-	-	-	-0.21 (.05)	-3.94***

Note. Other: $R^2_{\text{Nagelkerke}} = 0.128$; Self: $R^2_{\text{Nagelkerke}} = 0.199$; Group preference: $R^2 = 0.122$.

*$p < .05$, **$p < .01$, ***$p < .001$.

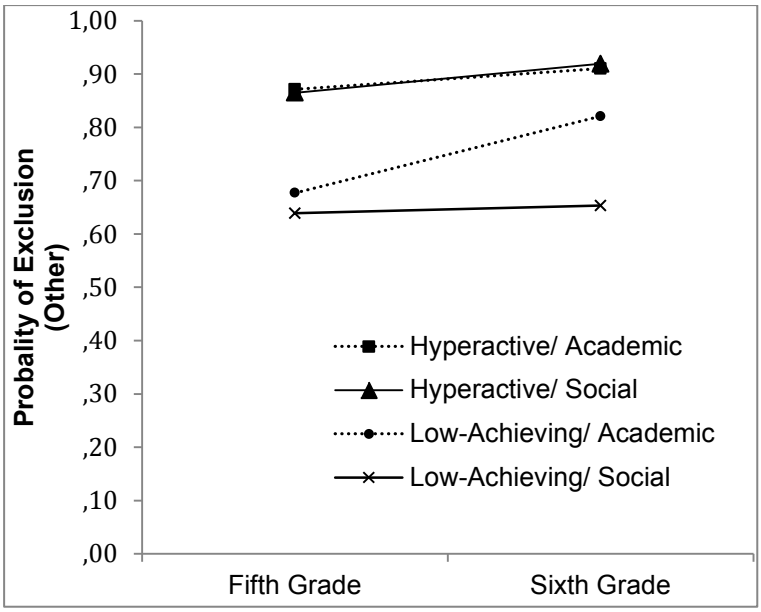


Figure 1. Exclusion from the perspective of other by grade, difficulty type, and context.

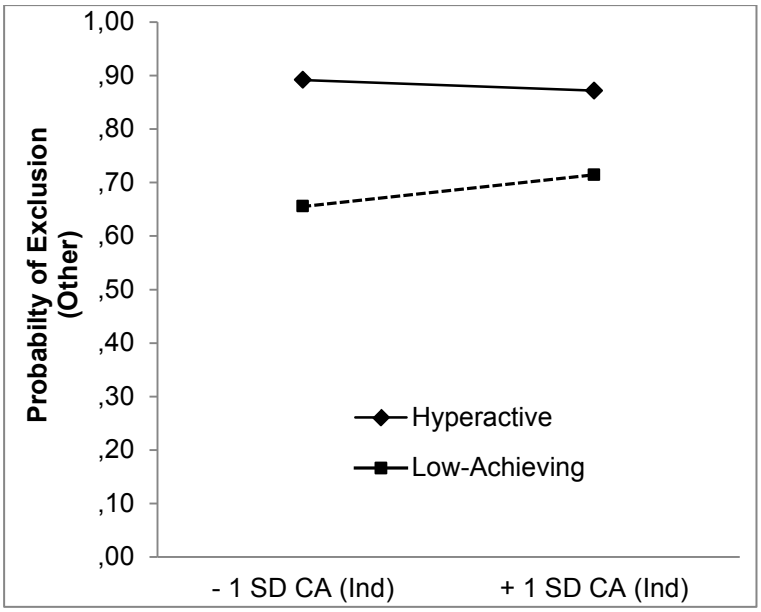


Figure 2. Exclusion from the perspective of other by individual competitive attitudes (CA) and difficulty type.

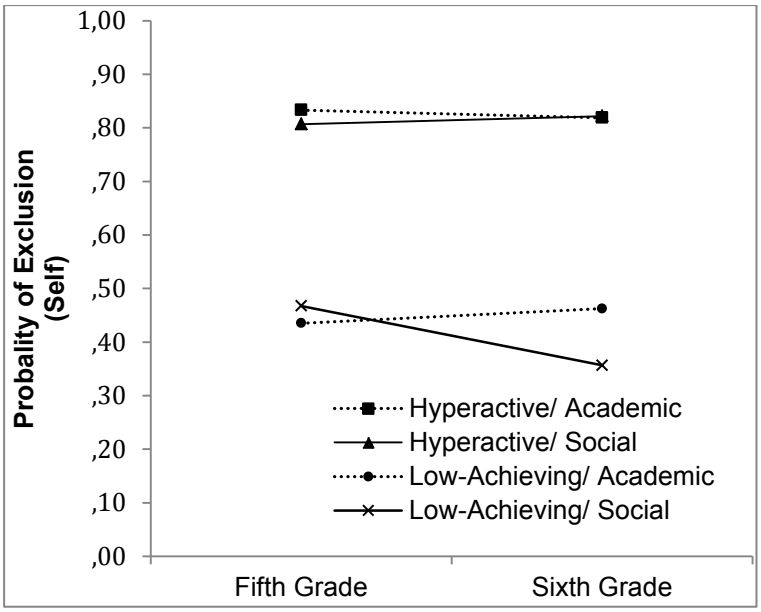
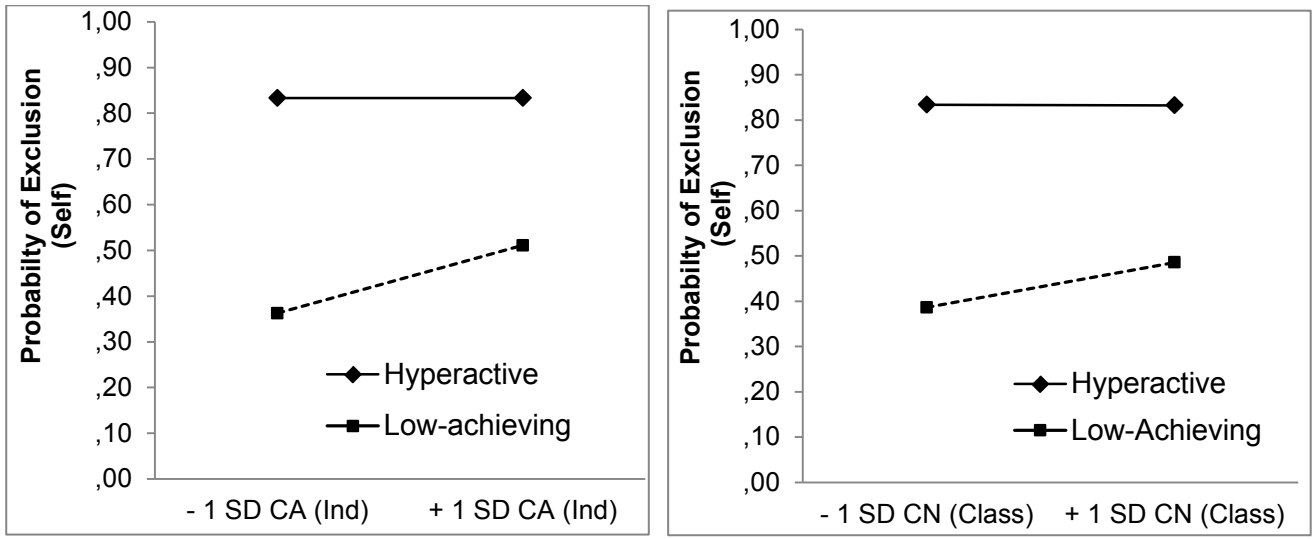


Figure 3. Exclusion from the perspective of self by grade, difficulty type, and context.



(a) (b)

Figure 4. Exclusion from the perspective of self (a) by difficulty type and individual competitive attitudes (CA) and (b) by difficulty type and competitive classroom norms (CN)

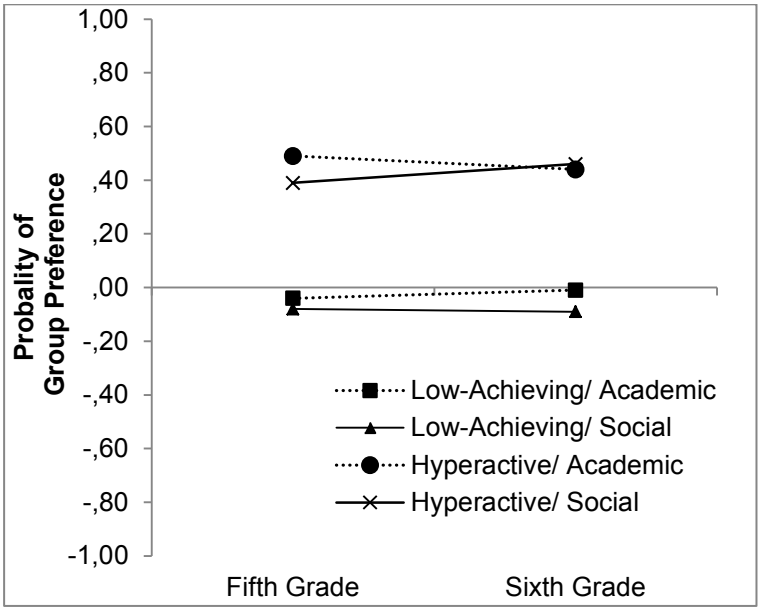
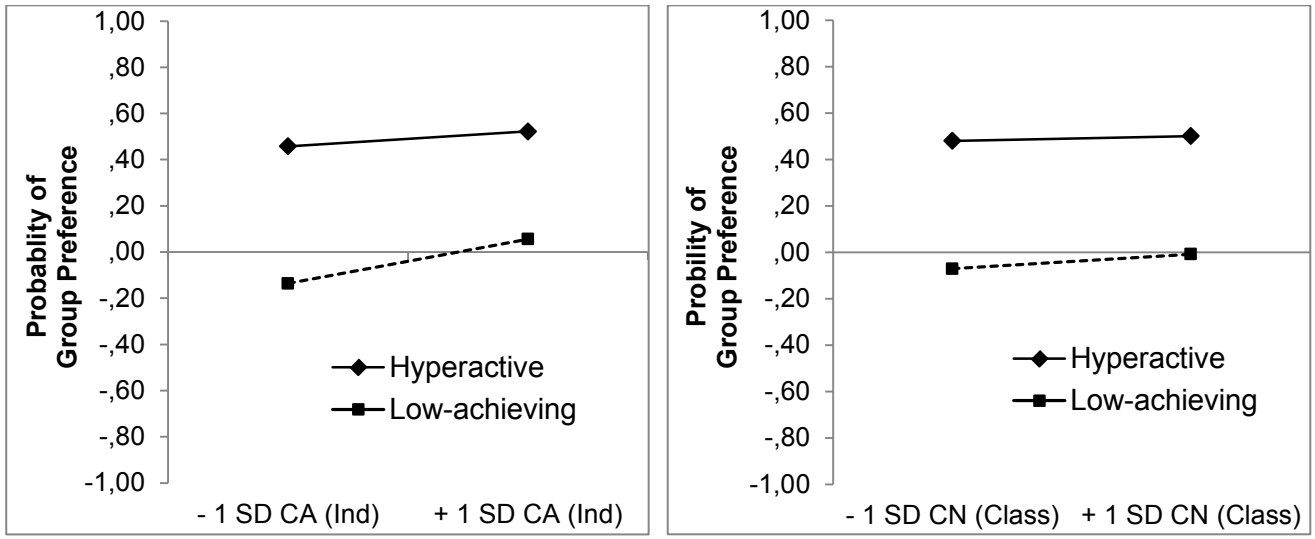
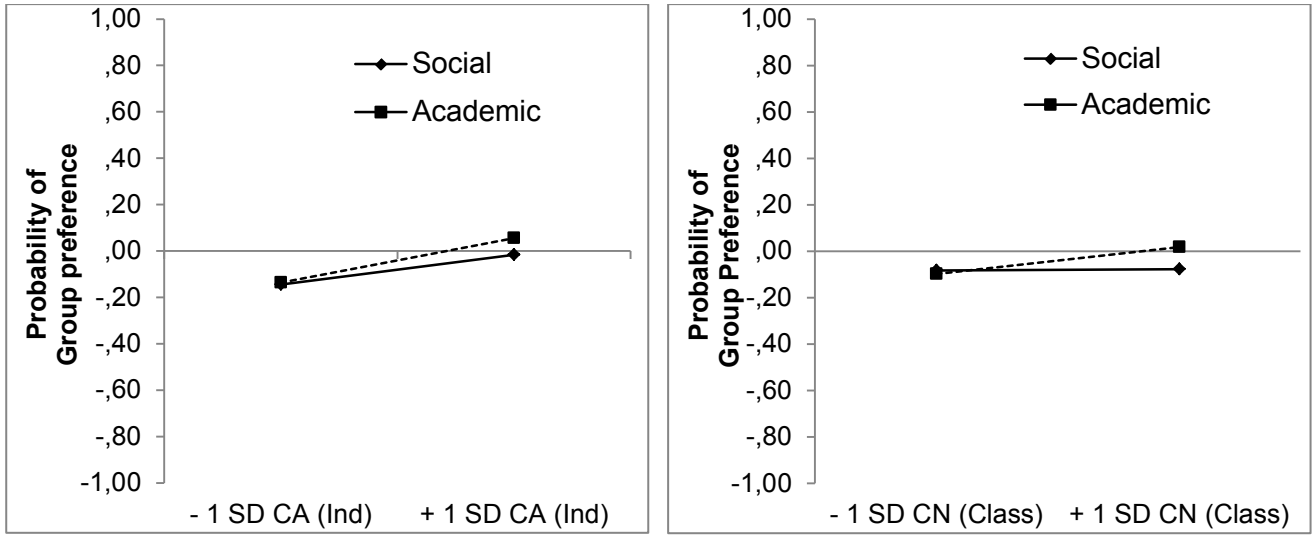


Figure 5. Preference for group functioning by grade, difficulty type, and context.



(a) *(b)*

Figure 6. Preference for group functioning (a) by difficulty type and individual competitive attitudes (CA) and (b) by difficulty type and of exclusion and classroom competitive norms (CN)



(a) *(b)*

Figure 7. Preference for group functioning (a) by context of exclusion and individual competitive attitudes (CA) and (b) by context of exclusion and competitive classroom norms (CN)

11 Chapter 6: Emotionally Supportive Classroom Interactions and Students' Perception of Their Teachers as Just and Caring

At the time of submission of this dissertation, this manuscript had been submitted to the *Journal of Learning and Instruction.*

Gasser, L., Grütter, J., Buholzer, A., & Wettstein, A. (under review). Emotionally supportive classroom interactions and students' perception of their teachers as just and caring. *Journal of Learning and Instruction.*

Emotionally Supportive Classroom Interactions and Students' Perceptions of Their Teachers as Just and Caring

Luciano Gasser[1]

Jeanine Grütter[1]

Alois Buholzer[1]

Alexander Wettstein[2]

[1]University of Teacher Education Lucerne

[2]University of Teacher Education Berne

The study was funded by the Swiss National Science Foundation. The authors thank teachers and students for their study participation. We also thank our student teachers for their help during data collection.

Correspondence concerning this article should be addressed to Luciano Gasser, Institute for School and Diversity, University of Teacher Education Lucerne, 6004 Lucerne, Switzerland. Electronic mail may be sent to luciano.gasser@phlu.ch

Highlights

- Students' perception of teacher justice and care has important adaptive functions
- 1009 students from Switzerland were followed from the 5th to the 6th grade
- Students' perception of teacher care decreased during the upper elementary grades
- Teachers' emotional support protected against negative teacher perceptions

Abstract

The subjective experience of teacher justice and care has important adaptive functions for children's and adolescents' future social and academic development. The present study investigated how students' perceptions of teacher justice and care develop over the upper elementary grades and to what degree teachers' observed emotional support predicts changes in positive teacher perceptions. The study consisted of 1,009 upper elementary students who participated in the study at two measurement time points in the fifth and sixth grade. Multilevel analyses revealed that, over the year, teacher perceptions as caring and just decreased in classrooms with low quality teacher-student interactions in the emotional domain. These results suggest a protective function of teacher's emotional support against decreases in students' perceptions of teacher justice and care. The discussion focuses on how specific classroom interactions might contribute to the development of positive teacher perceptions.

Key words: Teacher justice, teacher care, emotional support, CLASS, classroom observations

11.1 Introduction

Teacher justice and teacher care are increasingly recognized as key dimensions of teaching quality (Noddings, 2008; Nucci, 2008; Oser, 1994; Wentzel, 1997; Zeichner, 2009). Even though teachers feel strongly committed to the ethical aspects of the teaching profession (Cochran-Smith, Shakman, Jong, Terrell, Barnatt, & McQuillan, 2009), children and adolescents often experience unfair treatment and low emotional care in schools (e.g., Berti, Molinari, & Speltini, 2010; Ruck & Wortley, 2002). The subjective experience of injustice and low emotional care has serious implications for students' future academic and social-emotional adjustment such as depression, conduct problems or school failure (e.g., Greene, Way, & Pahl, 2006; Wentzel, Battle, Russell, & Looney, 2010).

While most of the previous research has focused on developmental consequences of perceived teacher justice and care, little is known about the antecedents of such positive teacher perceptions. On the basis of a two-way wave study we investigated how students' perceptions of justice and care change in the upper elementary grades and how teacher-student interactions in the emotional domain relate to possible changes in students' perceptions. We assessed the emotional quality of teacher-student interactions with the Classroom Assessment Scoring System (CLASS) which covers many aspects of what characterizes a caring and just teacher, such as attempts to form strong relationships with students, or attempts to respond to the cognitive and social needs of all students. We focused on teacher-student interactions because they represent proximal indicators of students' experiences in the classroom and might be expected to play an important role in the formation of students' perceptions of a fair and caring classroom environment. Finally, research that relates teacher-student interactions to academic and social outcomes builds an important knowledge base about relevant developmental processes in the classroom and therefore provides guidance for improving teachers' classroom practices (Bronfenbrenner & Morris, 2006; Pianta & Hamre, 2009).

11.1.1 Perceptions of Teacher Justice and Care

Philosophers and moral psychologists describe justice and care as two main principles which characterize ethical action (Frankena, 1973; Gibbs, 2003). While justice focuses on equal treatment, reciprocity and reversibility (Rawls, 1971), the principle of care describes the obligation to promote the good of others and avoid harm (Noddings, 2008). The two principles importantly complement each other (e.g., equal treatment remains "cold", if not accompanied by emotional care). We organise the following literature review according to

these two ethical principles and argue that experiences of teacher justice and care are important psychological concepts to explain children's and adolescents' academic and social-emotional development.

Teacher Justice

We conceptualize teacher justice according to the just-world theory, which characterizes teacher justice from a subjective and psychological viewpoint rather than a normative-prescriptive perspective (Dalbert, 2001). More specifically, Dalbert and Stoeber (2006) define teacher justice as "… individual students' subjective experience of their teachers' behaviour toward them personally" (p. 202) (e.g., "My teachers generally treat me fairly"). Following this definition, perceived teacher justice reflects the individual experience of being treated in a just way (*they-to-me* approach) (Dalbert, 2001). This conceptualization of teacher justice differs from approaches that measure teacher justice as behaviour directed to all students in the classroom (*they-to-us* approach). Therefore, the former is more likely to reflect an individual variable, whereas the latter is more indicative of classroom climate.

The belief that the teacher treats one in a fair way has important adaptive functions. Adolescents who experience high teacher justice have better grades and report less school distress compared to adolescents who believe that teachers treat them unfairly (Peter, Dalbert, Kloeckner, & Radant, 2013; Peter, Kloeckner, Dalbert, & Radant, 2012). This higher achievement and reduced distress may be explained by a higher confidence in fair academic demands and rewards. In other words, if students perceive their teachers as fair, they may be more motivated to engage in challenging tasks and achieve higher grades. Moreover, perceived teacher justice negatively predicts bullying (Donat, Umlauft, Dalbert, & Kamble, 2012) and delinquent behaviour (Donat, Dalbert, & Kamble, 2014). Perceived teacher justice thus strengthens students' motivation to treat peers fairly and to act in socially responsible ways.

To date, only a few studies have investigated how different classroom experiences relate to students' perceptions of teacher justice. Students view some strategies to enhance motivation as more fair than others (Thorkildsen, Nolen, & Fournier, 1994). Specifically, they judge strategies with a task focus as fairer than strategies that focus on praise and rewards for excellent performance. Additionally, there may also be differences in how students perceive their teachers due to individual characteristics. For example, students from ethnic minority groups perceive disciplinary practices from their teachers as less fair than students from ethnic majority groups (Ruck & Wortley, 2002).

Teacher Care

Noddings (2008) applied approaches from the ethics of care (e.g., Gilligan, 1982) to the classroom context and argued that teachers' care orientation represents a key aspect of good teaching. The care orientation essentially includes the teachers' attempt to respond to the individual needs of a child and to create supportive and strong teacher-student relationships. While most of the recent research assesses teacher care from the teacher perspective (Murray, Murray, & Waas, 2008), we focus on students' subjective experiences.

Perception of teacher care relates to children and adolescents' social-emotional and academic adaption. For example, perceptions of teachers' emotional caring (e.g., "My teacher really cares about me") positively predict social and academic motivation (e.g., Sakiz, Pape, & Hoy, 2012; Wentzel, 1997; Wentzel, Baker, & Russell, 2012), school liking and interest (Murray et al., 2008; Wentzel et al., 2010), and subjective wellbeing (Suldo, Friederich, White, Farmer, Minch, & Michalowski, 2009). In contrast, negative associations were found between perceptions of teacher care, depression (DeWit, Karioja, Rye, & Shain, 2011), and problem behaviour (Wang & Dishion, 2012).

There is evidence that cooperative learning arrangements strengthen students' beliefs "…that the teacher cares about and likes one as a person" (Johnson, Johnson, Buckman, & Richards, 1985, p. 407). Similar findings were reported from the Child Development Project, which focused on the promotion of students' social, ethical, and cognitive development (e.g., through cooperative learning). Among many other positive outcomes, the study revealed that middle school students who participated in the program during their elementary grades perceived their actual teachers as more respectful and trusting (e.g., "The teachers here really care about me") than students from control schools (Battistich, Schaps, & Wilson, 2004). Despite this positive evidence from prior studies, more research is necessary to learn about the specific classroom processes that contribute to positive student perceptions of teacher care.

11.1.2 Emotionally Supportive Teacher-Student Interactions

The present study focuses on the role of observed classroom interactions for students' perceptions of their teachers as just and caring. Over the past two decades educational and developmental researchers have highlighted the importance of investigating specific processes in classrooms, especially interactions between teachers and students, to better understand how different aspects of classroom interactions relate to students' social and cognitive development (Pianta & Hamre, 2009). The CLASS instrument is a reliable and valid observation instrument for global teaching quality and assesses teacher-student interactions in

the domains of (1) emotional support, (2) classroom organization and (3) instructional support. Interactions in the *emotional support domain*, which is the focus of our study, are characterized by the three following dimensions: (1) Positive climate, (2) teacher sensitivity and (3) regard for student perspective. Positive climate reflects the teachers' attempts to create strong relationships with students and to communicate in a warm, respectful and positive way. Teacher sensitivity refers to the teacher's awareness and responsiveness to the cognitive, social and emotional needs of students. Regard for student perspective encompasses how flexibly the teacher reacts to students' ideas, helps students to connect learning experiences to their current life, and encourages student expression and autonomy.

Prior research provides evidence that teachers' emotional support, as measured by the CLASS instrument, is an important precursor for students' social and emotional development. For example, mean-level as well as within-day consistency in the quality of teachers' emotional support predicts teacher-rated social competences in prekindergarten children (Curby, Brock, & Hamre, 2013; Mashburn et al., 2008). The effects of emotional support were unique, i.e. they remained significant, even after controlling for teacher-student interactions in the domains of classroom organization (i.e. teachers' attempts to manage students' behaviour and learning time) and instructional support (i.e., interactions which help students to acquire an integrated and in-depth understanding).

The domain of emotional support has important conceptual similarities with teacher justice and teacher care. The dimensions of emotional support described above are highly characteristic of a caring teacher, for example giving attention to students' individual needs including their needs for autonomy, strong emotional connections (Wentzel, 1997). Even though the CLASS instrument does not directly measure teacher justice (Hamre et al., 2013), it includes several aspects which might positively contribute to the experience of fair treatment. First, teacher justice is closely related to feelings of being a worthy member of a classroom community which in turn depends on teachers' attempts to create positive teacher-student relationships (Battistich, Solomon, Watson, & Schaps, 1997). Second, the CLASS is also sensitive to justice issues, because it measures teacher behaviour towards *all students* in the classroom and not behaviour towards *some few students* (Pianta, Hamre, Mintz, 2012). Therefore high scores in emotional support might also indicate teachers' attempts to fairly distribute affection and attention across all students in the classroom. The finding that students at risk profit most from effective emotional support measured by the CLASS instrument supports this argument (Curby, Rudasill, Edwards, & Pérez-Edgar, 2011; Hamre & Pianta, 2005; Johnson, Seidenfeld, Izard, & Kobak, 2013).

11.1.3 The Upper Elementary Grades in Switzerland

The present study includes a Swiss sample of upper elementary school teachers and students who were followed from the fifth to the sixth grade on the basis of a two-wave study. In contrast to the American school system, the Swiss secondary schools differentiate between two or three performance levels. Thus, selection decisions during the upper elementary grades (fifth and sixth grade) have important implications for students' future academic careers and occupational opportunities. The increasing level of school distress during the upper elementary grades might have negative implications with regard to social relationships among peers as well as among teachers and students. To date, we are not aware of any study which investigates how selection decisions during the upper elementary grades are related to students' perceptions of teacher justice and care.

The transition to secondary school is especially challenging for students with special educational needs (SEN). For example, students with SEN experience more victimization and lower self-esteem during transition to secondary school in comparison to typically developing students (Hughes, Banks, & Terras, 2013). As part of international efforts to promote inclusive education, Swiss elementary schools increasingly mainstream students with special educational needs (SEN). To date, few if any study has focused on how students with SEN perceive their teachers as fair and caring before the transition to secondary school. Increasing academic stress during the upper elementary grades may negatively affect perceptions of teacher fairness and caring in students with SEN in particular. It is therefore important to investigate if high quality teacher-student interactions in the emotional domain might have a protective function for the development of negative teacher perceptions (Hamre & Pianta, 2005). Accordingly, we tested if emotionally effective teacher-child interactions moderate possible relations between students' SEN status and changes in perceived teacher justice and care.

11.1.4 Study Hypotheses

Our study tested the following four hypotheses:

1. Students' perceptions of teacher justice and care decrease from the fifth to the sixth grade.
2. Observed emotional support from teachers functions as a protector for decrease in perceived teacher justice and care. Students from classrooms with high emotional support have a lower risk of decreases in perceived teacher justice and care compared to student from classrooms with low emotional support.

3. Special educational needs (SEN) status is negatively related to perceived teacher justice and care.
4. Students with SEN have a lower risk of decreases in perceived teacher justice and care if they are included in classrooms with high observed emotional support compared to SEN students in classrooms with low observed emotional support.

11.2 Method

11.2.1 Sample, Attrition, and Missing Values

One thousand and nine students from 54 school classes from different cantons of Switzerland participated in this two-wave study. In the first wave of the study (T1), students were on average 11 years old (M = 11.54, SD = 0.56) and at the second wave (T2), the mean age of students was 12 years (M = 12.58, SD = 0.56). The proportion of students with a migration background in each wave was 41% and 38% respectively.

Parents received an information letter that was translated into the official languages and the most spoken foreign languages of Switzerland. Parents were given the opportunity to cancel the study participation of their child, whereupon only 0.4% (T1) and 1% (T2) of the parents did not give their consent. At the first wave, 1,209 students (49% girls) participated, and at the second wave the sample consisted of 1,009 students (50% girls) (sample attrition = 16.5%). In order to test if there was as systematic pattern in the sample attrition, we used the MCAR (Missing Completely at Random) Test from Little (1998). The result of this test was not significant. Therefore, we concluded that the missing values on the main study variables were not related to any other measured or unmeasured variables.

All the school classes were inclusive. In the context of Switzerland, this means that at least one child of the class received additional educational assistance from a teacher with additional competencies in special educational needs instruction. In this study, we identified students with SEN by asking teachers about the additional support their students received. If a child received at least one lesson of additional support from a special needs teacher and did not receive grades for at least one subject, the child was classified as having SEN status. This criterion was chosen to ensure that students in our study had a moderate to high intensity of special learning needs; according to this criterion, 9% of the students had SEN status.

Eighty percent of the teachers that participated in both study waves were female and most of the teachers (44%) belonged to the age group of 26-30 years old, overall their ages ranged from 20 to 55 years. Additionally, teachers reported on average 11 years of teaching experience (M = 11.31, SD = 10.53).

11.2.2 Measures

Descriptive information for the study variables is given in Table 1.

Emotional quality of teacher-student interactions. Classroom interactions were assessed at T1 with the Upper Elementary CLASS instrument (Pianta et al., 2012). The measure includes 12 dimensions: (1) Positive climate, (2) teacher sensitivity, (3) regard for students' perspectives (4) behaviour management, (5) productivity, (6) negative climate, (7) instructional learning formats, (8) content understanding, (9) analysis and inquiry, (10) quality of feedback, (11), instructional dialogue, (12) student engagement. These dimensions are organized within three domains (Pianta et al., 2012): Emotional support (dimensions 1-3), classroom organization (dimensions 4-7) and instructional support (dimensions 8-11). Student engagement represents a separate dimension and is not assigned to one of the three domains (dimension 12). Research assistants observed four cycles of fifteen minutes. Based on these observations, each dimension was rated on a seven-point scale (1 = *low quality*, 7 = *high quality*). In order to receive stable assessments of classroom interactions, a minimum of four cycles is required (Pianta et al., 2012). Research assistants completed a two-day training course that involved review and coding of video examples. Prior to data collection, these research assistants proved their ability to use the CLASS instrument reliably in an online reliability test. In this test, examinees have to rate five 15-min segments of different classrooms; they pass the test and become certified CLASS observers when 80% of their ratings on all the twelve CLASS dimensions are within 1 point of master codes (Pianta et al., 2012). In this study, we averaged the mean scores of the four observation cycles for each dimension and, in a next step, calculated the mean scores for each of the three domains (e.g., Mashburn et al., 2008). The internal consistency of the three domains was high (emotional support: $\alpha = .84$, instructional support: $\alpha = .92$, classroom organization: $\alpha = .79$).

Students' perceived teacher justice. The scale to assess students' perceptions of teacher justice was adapted from Dalbert (2011) and consisted of six items (e.g., "My teacher often treats me unfairly" [reversed]). The original scale includes 10 items and was constructed for secondary school students. In a pilot study we examined which items were difficult to understand for upper elementary school students and excluded four items. The shortened scale used in this study also had a high reliability, $\alpha = .78$ (T1) respectively $\alpha = .80$ (T2) and a high stability across the two study waves $r_{tt} = .46$ ($p = .001$).

Students' perceived teacher care. Perceived teacher care was assessed using a scale from the Child Development Project (Developmental Studies Centre, 1988-2005). Thereby, we used four items that measured the subjective perception of teacher care (e.g., "My teacher

really cares about me"). The scale had a high reliability at both measurement times, α = .78 (T1) and α = .80 (T2) (test retest stability: r_{tt} = .44, p = .001).

11.2.3 Data Analysis

In this study, the data structure had three levels: First, the repeated measures of students across the two waves; second, students in school classes; and third, school classes. We first examined if there were significant differences between school classes in the two main study variables of teacher justice and teacher care. The result of these analyses revealed that classrooms significantly differed from each other in perceived teacher justice, $F(60, 2133) = 4.53$, $p < .001$, and perceived teacher care, $F(60, 2132) = 4.48$, $p < .001$, and that these differences between classrooms explained 8% of the total variance in perceived teacher justice and also in perceived teacher care. The *ICC(2)*, which denotes the homogeneity of teacher perceptions within classrooms and reflects the reliability of the group means, was *ICC(2)* = .79 for teacher justice and *ICC(2)* = .78 for perceived teacher care. Additionally, the measurements across the two waves depended on the characteristics of the students (teacher justice: $F[1205, 988] = 2.59$, $p < .001$; teacher care: $F(1205, 987) = 2.28$, $p < .001$). The differences between these students in their school classes explained 46% of the total variance in perceived teacher justice (*ICC[2]* = .61) and 41% of the total variance in perceived teacher care (*ICC[2]* = .56). These results suggest that, although students within classrooms are more similar in their perception of the teacher, perceptions of teacher justice and teacher care are more likely to represent subjective and individual variables. The hierarchical linear models were calculated with the R-package lme4 (Version 1.04) (Bates, Maechler, Bolker, & Walker, 2014) and followed the recommendations of Bliese and Polyhart (2002). Thereby, we first conducted simple models and added more complex terms to the models in a stepwise procedure. We first tested if models with a random term for the initial values at the first wave (intercepts) fitted the data better than models without such a random term. Second, we examined if a model with random intercepts and random slopes fitted the data better. Random slopes represent different changes in teacher justice and teacher care from the fifth to the sixth grade between students in classes. For each dependent variable, we chose the model that best fitted our data. We also controlled for students' sex. As results revealed no significant interaction effects including students' sex, we only included the main effects of students' sex into analyses (i.e. girls were more likely to perceive teachers as fair and caring compared to boys).

11.3 Results

11.3.1 Perceived Teacher Justice

A model with random intercepts (initial values in the fifth grade) and random slopes (changes from the fifth to the sixth grade) fitted the data significantly better than a model with only random intercepts ($\Delta\chi^2_{(4)}$ = 16.34, p = .003). On average, there was no significant change in perceived teacher justice (see step 1, Table 2). Therefore, hypothesis 1, which assumed a decrease in teacher justice over the year, was rejected. However, the different variance components of the model showed that there were significant differences in initial values and changes from the fifth to the sixth grade between students and between school classes (see step 1, Table 2). In order to predict changes from the fifth to the sixth grade, we added the interactions of each predictor variable with the time variable to the model (see step 3, Table 2). All the predictor variables were mean-centred to enable comparison of results between the different classrooms (Enders & Tofighi, 2007).

We assumed that high emotional support from the teacher in the fifth grade would have a protective function for students' justice perception of their teacher (hypothesis 2). The results (see step 3, Table 2) indicate that high emotional support from the teacher in the fifth grade significantly predicted changes in perceived teacher justice from the fifth to the sixth grade. In order to better understand this interaction, we plotted these changes from the fifth to the sixth grade. As can be seen in figure 1, students in classrooms who experience high emotional support had significantly increased perceptions of teacher justice (slopes test: B = 0.08, SE = 0.04, p =.046), while students in classrooms who experienced low perceived emotional support decreased in their perceptions of teacher justice (slopes test: B = -0.11, SE = 0.04, p =.005). Thereby, emotional support explained 45% of the variance in changes in perceived teacher justice.

No significant relationship between changes in teacher justice and instructional support were found (see step 3, Table 2). Surprisingly, and contrary to our hypotheses, classroom management significantly predicted changes in teacher justice. Simple slope tests showed that students in classrooms with high values for classroom organization decreased in their perceptions of teacher justice over the year (slopes test: B = - 0.07, SE = 0.03, p =.035), while students in classrooms with low values for classroom organization did not change in their perception of their teacher over the year (slopes test: B = 0.04, SE = 0.03, p = .265). Classroom organization explained 25% of the variance in changes over the year between classrooms.

In support of hypothesis 3, students with SEN status rated their teacher as less just compared to students without SEN (see step 2, Table 2), and this perception did not significantly change over time (see step 3, Table 2). In order to test if students with SEN might have a lower risk of decreases in teacher justice in classrooms with high emotional support, compared to SEN students in classrooms with low emotional support (hypothesis 4), we tested a three-way interaction between SEN status, emotional support, and time. As this three-way interaction was not significant, we rejected hypothesis 4. In other words, all students – regardless of their SEN status – may benefit equally from high emotional support from their teacher. In order to enhance the power of our statistical analyses, this three-way interaction was not included in the final model.

11.3.2 Perceived Teacher Care

A model with random intercepts (initial values in the fifth grade) and random slopes (changes from the fifth to the sixth grade) fits the data better than a model with solely random slopes ($\Delta\chi^2_{(4)}$ = 33.21, $p < .001$). In line with hypothesis 1, the results of this basic model showed that perceived teacher care significantly decreased from the fifth to the sixth grade (see Step 1, Table 3). Additionally, there were differences between students and between classrooms in the initial values and the changes across the two waves (see step 1, Table 3).

Hypothesis 2 assumed that high emotional support would prevent the decrease in perceived teacher care over the year. As outlined in Table 3 (see step 1), this relationship was significant. Figure 2 shows that students in classrooms with low emotional support significantly decreased in their perception of their teacher as caring from the fifth to the sixth grade (slopes test: B = -0.31, SE = 0.06, $p < .001$), while perceived teacher care did not decrease in classrooms with high emotional support (slopes test: B = -0.02, SE = 0.05, $p < .05$). In other words, emotional support had a protective function for the decrease in perceived teacher care; therefore, hypothesis 2 was supported. Emotional support explained 45% of the variance in changes in perceived teacher care between classrooms. No significant effects for classroom organization and instructional support were found (see Table 3, step 3).

Students with SEN rated their teacher as more caring in the fifth grade compared to students without SEN (see step 2, Table 3). However, this difference was no longer significant when the predictive role of observed classroom interactions over time was considered, and this perception did not significantly change over time (see step 3, Table 3). In order to test if students with SEN might have a lower risk of decreases in teacher care if they are in classrooms with high emotional support, compared to SEN students in classrooms with

low emotional support (hypothesis 4), we tested a three-way interaction between SEN status, emotional support, and time. As this three-way interaction was not significant, we rejected hypothesis 4b. This result means that emotional support may have a protective role for all students – regardless of their SEN status. This three-way interaction was not included in the final model.

11.4 Discussion

The study revealed three main findings: First, we found that students' perceptions of teacher care decreased from the fifth to the sixth grade. Second, teachers' observed emotional support functions as a protector for the decline in perceived teacher justice and care. Third, students with SEN experienced less fair treatment than students without SEN. However, we did not find evidence that teachers' emotional support had differential effects on the perceptions of students with and without SEN. Previous research has mainly focused on how children's and adolescents' perceptions of teacher justice and care relate to their future social-emotional and academic adaption (e.g., Peter et al., 2012; Sakiz et al., 2012; Wentzel et al., 2012). This study extends the research by focusing on the question of how emotionally supportive teacher-student interactions predict positive changes in teacher perceptions in the upper elementary grades.

The decrease in students' perceptions of teacher care might be explained by increasing academic stress during the upper elementary grades in nations such as Germany or Switzerland where secondary school systems differentiate between two or three achievement levels. Upcoming selection decisions and heightened teacher expectations about students' academic performance might conflict with upper elementary students' perceptions of their teachers as a source of social support. This interpretation is supported by research from Switzerland according to which student misbehaviour, teacher aggression and negative teacher-student relationships increased during the upper elementary grades (Wettstein, Ramseier, Scherzinger, 2016). Moreover, a German longitudinal study revealed that internalizing and externalizing problems are higher before the transition to secondary school than after (Ball, Lohaus, & Miebach, 2006). This finding suggests that stress is highest before transition and is released once promotion decisions and placement to a specific achievement level are clear (Ball et al., 2006). In contrast, research including US samples reveals that self-esteem and competence beliefs drop after transition to secondary school (e.g., Wigfield & Eccles, 1994). More research is necessary to investigate how the specific characteristics of

different national school systems relate to differences in students' social-emotional adaption before and after transition to secondary school.

However, decreases in perceived teacher care only occurred in students from classrooms characterized by a low quality of emotional support from teachers. Similar findings were found for teacher justice, whereby justice only decreased in school classes with low emotional support and increased when teachers provided high emotional support for their students. These findings corroborate previous research which revealed that teachers' emotional support positively contributes to children's development of social competences (Curby et al. 2013; Mashburn et al., 2008). The findings are also consistent with studies on the role of teacher-student relationships in adolescence which revealed that high-quality teacher-student relationships function as a buffer against the normative decline of school compliance (Wang & Eccles, 2012).

While the protective function of teachers' emotional support for students' perceptions of teacher care requires little explanation, the finding that teachers' emotional support was associated with changes in students' perception of teacher justice is less evident. Even though the CLASS instrument does not directly measure teachers' attempts to treat students in just ways, teachers' emotional support might positively contribute to the experience of a strong classroom and school community which in turn forms an important basis for students' perceptions of fair teacher treatment (Battistich et al.; 1997). A study by Sanders and Downer (2012) showed that emotionally supportive teacher-student interactions, measured by the CLASS tool, predicted higher acceptance of diversity in pre-kindergarten classrooms. Therefore, high-quality emotional support might enhance the experience that each student is respected and valued and treated equally irrespective of any differences in their socio-economic, ethnic or cultural background.

The effects of teachers' emotional supports were unique, i.e. they remained after controlling for classroom in the domains of instructional support and classroom organization. While no effects were found for teachers' instructional support, classroom organization significantly predicted perceptions of teacher justice. Surprisingly, we found that teacher justice decreased when the classroom was observed as highly organized, whereas teacher justice remained unchanged when classroom organization was low. Previous research revealed that classroom organization predicts self-control, positive work habits and academic engagement in kindergarten children (Rimm-Kaufman, Curby, Grimm, Nathanson, & Brock, 2009). However, less is known about how classroom organization relates to students' social development. For example, no significant associations between classroom organization and

prosocial or aggressive behaviour were found (Merritt, Wanless, Rimm-Kaufman, & Cameron, 2012). Pakarinen et al. (2014) even showed that high classroom organization predicted less socially competent behaviour (i.e., socially dependent behaviour) which might indicate that students from highly controlling classrooms have fewer possibilities to practice socially responsible behaviour. Similarly, students in our study might have perceived highly organized teachers as controlling and less engaged in creating a just classroom community.

We further found that students with SEN were less likely to perceive the teacher as treating them fairly compared to students without SEN. Interestingly, students with and without SEN did not differ with regard to their perceptions of teacher care. Our sample consisted of inclusive classrooms in which students with SEN received additional support from a special educational teacher. Even though students with SEN might receive equal or greater academic and social support from their teachers, they might also be more likely to experience negative teacher-student interactions or receive lower grades than their peers without SEN. As a consequence, they may be more sensitive to justice issues compared to students without SEN. However, it is also possible that students with SEN perceive lower teacher justice for reasons unrelated to experiences at school. For example, students with SEN are characterized by lower self-esteem or self-concept compared to their peers without SEN (Cambra & Silvestre, 2003), and as a consequence might perceive teachers' practices towards them as more biased.

Several studies revealed that the quality of teacher-student interaction might be of special importance for students at risk (e.g., Curby et al., 2011; Hamre & Pianta, 2005). For example, prosocial behaviour of children with depressive caregivers increased in classrooms with high emotional support, but decreased in classrooms with low emotional support (Johnson et al, 2013). In contrast to these studies, we found no evidence that teachers' emotional support had differential influences on students with and without SEN. Even though, students with SEN perceived their teachers as less just, this association was not very strong. In addition, students with and without SEN had similar perceptions of teacher care. Therefore, students with SEN might not have a different need to improve confidence in their teachers through high emotional support compared to their peers without SEN. This might be different for students with multiple functional problems (e.g., behavioural, social) (Hamre & Pianta, 2005). Moreover, it is possible that aspects of classroom experiences other than teachers' emotional support affect SEN students' sense of teacher justice (e.g., grading or disciplinary practices).

The following limitations should be considered when interpreting the results. First, our study only included two measurement points. More extensive longitudinal studies are necessary to get a more comprehensive picture of how students' perceptions of teacher justice and care develop before and after transition to secondary school in countries, such as Switzerland or Germany, which distinguish different types of secondary education. Second, this study did not consider how teachers' emotional support might affect students' social and academic adaption through students' perceptions of their teacher as caring and just. To investigate if students' perceptions might function as an important mechanism through which teacher practices relate to students' future social and academic outcomes, more complex designs are necessary. Third, aspects of teacher behaviour other than interactions in the emotional domain might be important to explain individual differences in students' perceptions of teacher justice and care (e.g., teachers' reactions to classroom transgressions or their strategies to promote prosocial behaviour). Thus, our study only allows for limited insights into how classroom experiences might contribute to positive perceptions of teacher justice and care.

Perceptions of teacher justice and care are important psychological concepts to explain healthy development in children and adolescents (e.g., Dalbert, 2001; Greene et al., 2006; Wentzel, 1997). This might be especially true for important developmental periods such as the transition from elementary to secondary school. Despite this, little is known about how different interactions in classrooms might enhance students' perceptions that their teacher treats them in a supportive and just way. The present study focused on the role of teacher-student interactions in the emotional domain and as such provides concrete knowledge about the processes which contribute to students' perceptions of teacher justice and care. Intervention programs which specifically focus on improving the quality of daily classroom interactions (e.g., through video-based coaching) might be especially promising to enhance positive teacher perceptions and classroom climate in general (e.g., Mikami, Gregory, Allen, Pianta, & Lun, 2011).

References

Ball, J., Lohaus, A., & Miebach, C. (2006). Psychische Anpassung und schulische Leistungen beim Wechsel von der Grundschule zur weiterführenden Schule [Psychological adjustment and school achievement during transition from elementary to secondary school]. *Zeitschrift für Entwicklungspsychologie und Pädagogische Psychologie*, *38*, 101-109.

Bates, D., Maechler, M., Bolker, B., & Walker, S. (2014). *lme4: Linear mixed-effects models using eigen and s4* [Computer software manual]. Retrieved from http://CRAN.R-project.org/package=lme4 (R package version 1.0-6)

Battistich, V., Solomon, D., Watson, M., & Schaps, E. (1997). Caring school communities. *Educational Psychologist*, *32*, doi: 137-151. 10.1207/s15326985ep3203_1

Battistich, V., Schaps, E., & Wilson, N. (2004). Effects of an elementary school intervention on students' "connectedness" to school and social adjustment during middle school. *Journal of Primary Prevention*, *24*, 243-262. doi: 10.1023/b:jopp.0000018048.38517.cd

Berti C., Molinari L. & Speltini G. (2010). Classroom justice and psychological engagement: Students' and teachers' representations. *Social Psychology of Education, 13*, 541-556. doi:10.1007/s11218-010-9128-9

Bliese, P., & Ployhart, R. (2002). Growth modeling using random coefficient models: Model building, testing, and illustrations. *Organizational Research Methods, 5*, 362–387. doi: 10.1177/109442802237116

Bronfenbrenner, U., & Morris, P. (1998). The ecology of developmental processes. In R. M. Lerner (Ed.), *Theoretical models of human development: Vol. 1. Handbook of Child Psychology* (5th ed., pp. 993–1028). New York, NY: Wiley.

Bryk, A.S., & Raudenbush, S.W. (2002). *Hierarchical Linear Models in Social and Behavioral Research: Applications and Data Analysis Methods* (1st Edition). Newbury Park, CA: Sage Publications

Cambra, C., & Silvestre, N. (2003). Students with special educational needs in the inclusive classroom: Social integration and self-concept. *European Journal of Special Needs Education, 18*, 197–208. doi: 10.1080/0885625032000078989

Cochran-Smith, M., Shakman, K., Jong, C., Terrell, D. G., Barnatt, J., & McQuillan, P. (2009). Good and just teaching: The case for social justice in teacher education. *American Journal of Education*, *115*, 347-377. doi: 10.1086/597493

Curby, T. W., Brock, L. L., & Hamre, B. K. (2013). Teachers' emotional support consistency predicts children's achievement gains and social skills. *Early Education & Development*, *24*, 292-309. doi: 10.1080/10409289.2012.665760

Curby, T. W., Rudasill, K. M., Edwards, T., & Pérez-Edgar, K. (2011). The role of classroom quality in ameliorating the academic and social risks associated with difficult temperament. *School Psychology Quarterly*, *26*, 175-188. doi: 10.1037/a0023042

Dalbert, C. (2001). *The justice motive as a personal resource: Dealing with challenges and critical life events*. New York: Plenum.

Dalbert, C. (2011). Übersichtsarbeit. Warum die durch die Schüler und Schülerinnen individuell und subjektiv erlebte Gerechtigkeit des Lehrerhandelns wichtig ist [Why is the Students' Subjective and Individual Experiences of Justice in their Teachers' Behavior Important?]. *Zeitschrift für Pädagogische Psychologie, 25*, 5–18. doi: 10.1024/1010-0652/a000031

Dalbert, C. & Stoeber, J. (2006). The personal belief in a just world and domain-specific beliefs about justice at school and in the family: A longitudinal study with adolescents. *International Journal of Behavioral Development, 30,* 200–207. doi: 10.1177/0165025406063638

Developmental Studies Center (1988 –2005). *Student questionnaire, Child Development Project (Elementary school version*). Retrieved from http://www.devstu.org/sites/default/files/media/pdfs/cdp/DSC_ElemSch_scales.pdf

DeWit, D. J. D., Karioja, K., Rye, B. J., & Shain, M. (2011). Perceptions of declining classmate and teacher support following the transition to high school: Potential correlates of increasing student mental health difficulties. *Psychology in the Schools*, *48*, 556-572. doi: 10.1002/pits.20576

Donat, M., Dalbert, C., & Kamble, S. V. (2014). Adolescents' cheating and delinquent behavior from a justice-psychological perspective: The role of teacher justice. *European Journal of Psychology of Education*, *29*, 635-651. doi: 10.1007/s10212-014-0218-5

Donat, M., Umlauft, S., Dalbert, C., & Kamble, S. V. (2012). Belief in a just world, teacher justice, and bullying behavior. *Aggressive Behavior, 38*, 185–193. doi: 10.1002/ab.21421

Enders, C. K., & Tofighi, D. (2007). Centering Predictor Variables in Cross-Sectional Multilevel Models: A New Look at an Old Issue. *Psychological Methods*, *12*, 121-138. doi: 10.1037/1082-989x.12.2.121

Frankena, W. K. (1973). *Ethics.* Englewood Cliffs, New Jersey: Prentice-Hall.

Gibbs, J. C. (2003). *Moral development and reality. Beyond the theories of Kohlberg and Hoffman*. Thousand Oaks, CA: Sage.

Gilligan, C. (1982). *In a different voice: Psychological theory and women's development.* Cambridge, MA: Harvard University Press.

Greene, M. L., Way, N., & Pahl, K. (2006). Trajectories of perceived adult and peer discrimination among Black, Latino, and Asian American adolescents: Patterns and psychological correlates. *Developmental Psychology*, *42*, 218-236. doi: 10.1037/0012-1649.42.2.218

Hamre, B. K., & Pianta, R. C. (2005). Can instructional and emotional support in the first-grade classroom make a difference for children at risk of school failure? *Child Development, 76*, 949–967. doi: 10.1111/j.1467-8624.2005.00889.x

Hamre, B. K., Pianta, R. C., Downer, J. T., DeCoster, J., Mashburn, A. J., Jones, S. M., ... & Brackett, M. A. (2013). Teaching through interactions. *The Elementary School Journal*, *113*, 461-487. doi: 10.1086/669616

Hughes, L. A., Banks, P., & Terras, M. M. (2013). Secondary school transition for children with special educational needs: A literature review. *Support for Learning*, *28*, 24-34. doi: 10.1111/1467-9604.12012

Johnson, D. W., Johnson, R. T., Buckman, L. A., & Richards, P. S. (1985). The effect of prolonged implementation of cooperative learning on social support within the classroom. *The Journal of Psychology*, *119*, 405-411. doi: 10.1080/ 00223980.1985.10542911

Johnson, S. R., Seidenfeld, A. M., Izard, C. E., & Kobak, R. (2013). Can classroom emotional support enhance prosocial development among children with depressed caregivers? *Early Childhood Research Quarterly*, *28*, 282-290. doi: 10.1016/j.ecresq.2012.07.003

Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*, 1198–1202. doi: 10.1080/01621459.1988.10478722

Mashburn, A. J., Pianta, R. C., Hamre, B. K., Downer, J. T., Barbarin, O., Bryant, D., et al. (2008). Measures of classroom quality in pre-kindergarten and children's development of academic, language and social skills. *Child Development, 79,* 732–749. doi: 10.1111/j.1467-8624.2008.01154.x

Merritt, E. G., Wanless, S. B., Rimm-Kaufman, S. E., Cameron, C., & Peugh, J. L. (2012). The contribution of teachers' emotional support to children's social behaviors and self-regulatory skills in first grade. *School Psychology Review*, *41*, 141-159.

Mikami, A. Y., Gregory, A., Allen, J. P., Pianta, R. C., & Lun, J. (2011). Effects of a teacher professional development intervention on peer relationships in secondary classrooms. *School Psychology Review*, *40*, 367-385.

Murray, C., Murray, K. M., & Waas, G. A. (2008). Child and teacher reports of teacher–student relationships: Concordance of perspectives and associations with school adjustment in urban kindergarten classrooms. *Journal of Applied Developmental Psychology*, *29*, 49-61. doi: 10.1016/j.appdev.2007.10.006

Noddings, N. (2008). Caring and moral education. In L. P. Nucci & D. Narvaez (Eds.), *Handbook of moral and character education* (pp. 161-174). New York, NY: Routledge.

Nucci, L. (2008). *Nice is not enough: Facilitating moral development.* Upper Saddle River, NJ: Pearson.

Oser, F. (1994). Moral perspectives on teaching. *Review of Research in Education, 20*, 57-127. doi: 10.3102/0091732x020001057

Pakarinen, E., Aunola, K., Kiuru, N., Lerkkanen, M. K., Poikkeus, A. M., Siekkinen, M., & Nurmi, J. E. (2014). The cross-lagged associations between classroom interactions and children's achievement behaviors. *Contemporary Educational Psychology*, *39*, 248-261. doi: 10.1016/j.cedpsych.2014.06.001

Peter, F., Dalbert, C., Kloeckner, N., & Radant, M. (2013). Personal belief in a just world, experience of teacher justice, and school distress in different class contexts. *European Journal of Psychology of Education*, *28*, 1221-1235. doi: 10.1007/s10212-012-0163-0

Peter, F., Kloeckner, N., Dalbert, C., & Radant, M. (2012). Belief in a just world, teacher justice, and student achievement: A multilevel study. *Learning and Individual Differences*, *22*, 55-63. doi: 10.1016/j.lindif.2011.09.011

Pianta, R. C., & Hamre, B. K. (2009). Conceptualization, measurement, and improvement of classroom processes: Standardized observation can leverage capacity. *Educational Researcher, 38,* 109–119. doi: 10.3102/0013189x09332374

Pianta, R., Hamre, B., & Mintz, S. (2012). *Classroom Assessment Scoring System* [*CLASS*] *manual, Upper Elementary.* Baltimore: Brookes.

Rawls, J. (1971). *A theory of justice*. Cambridge, Mass: Harvard University Press.

Rimm-Kaufman, S. E., Curby, T. W., Grimm, K. J., Nathanson, L., & Brock, L. L. (2009). The contribution of children's self-regulation and classroom quality to children's adaptive behaviors in the kindergarten classroom. *Developmental Psychology*, *45*, 958-972. doi: 10.1037/a0015861

Ruck, M. D., & Wortley, S. (2002). Racial and ethnic minority high school students' perceptions of school disciplinary practices: A look at some Canadian findings. *Journal of Youth and Adolescence*, *31*, 185-195. doi: 10.1023/A:1015081102189

Sakiz, G., Pape, S. J., & Hoy, A. W. (2012). Does perceived teacher affective support matter for middle school students in mathematics classrooms? *Journal of School Psychology*, *50*, 235-255. doi: 10.1016/j.jsp.2011.10.005

Sanders, K., & Downer, J. (2012). Predicting acceptance of diversity in pre-kindergarten classrooms. *Early Childhood Research Quarterly*, *27*, 503-511. doi: 10.1016/ j.ecresq.2011.12.001

Suldo, S. M., Friedrich, A. A., White, T., Farmer, J., Minch, D., & Michalowski, J. (2009). Teacher support and adolescents' subjective well-being: A mixed-methods investigation. *School Psychology Review*, *38*, 67-85.

Thorkildsen, T. A., Nolen, S. B., & Fournier, J. (1994). What is fair? Children's critiques of practices that influence motivation. *Journal of Educational Psychology, 86*, 475–486. doi: 10.1037//0022-0663.86.4.475

Wang, M. T., & Eccles, J. S. (2012). Social support matters: Longitudinal effects of social support on three dimensions of school engagement from middle to high school. *Child Development, 83*, 877–895. doi: 10.1111/j.1467-8624.2012.01745.x

Wang, M. T., & Dishion, T. J. (2012). The trajectories of adolescents' perceptions of school climate, deviant peer affiliation, and behavioral problems during the middle school years. *Journal of Research on Adolescence, 22*, 40–53. doi: 10.1111/j.1532-7795.2011.00763.x

Wentzel, K. R. (1997). Student motivation in middle school: The role of perceived pedagogical caring. *Journal of Educational Psychology*, *89*, 411. doi: 10.1037//0022-0663.89.3.411

Wentzel, K. R., Baker, S. A., & Russell, S. L. (2012). Young adolescents' perceptions of teachers' and peers' goals as predictors of social and academic goal pursuit. *Applied Psychology*, *61*, 605-633. doi: 10.1111/j.1464-0597.2012.00508.x

Wentzel, K. R., Battle, A., Russell, S. L., & Looney, L. B. (2010). Social supports from teachers and peers as predictors of academic and social motivation. *Contemporary Educational Psychology*, *33*, 193-202. doi: 10.1016/j.cedpsych.2010.03.002

Wettstein, A., Ramseier, E., & Marion Scherzinger, M. (in press). Eine konfirmatorische Mehrebenen-Faktorenanalyse zur Schülerwahrnehmung von Störungen im Unterricht der Klassen- und einer Fachlehrperson [A confirmatory mulitlevel-factor analysis on

students' perceptions of classroom disruptive behavior]. *Psychologie in Erziehung und Unterricht*.

Wigfield, A., & Eccles, J. S. (1994). Children's competence beliefs, achievement values, and general self-esteem change across elementary and middle school. *The Journal of Early Adolescence*, *14*, 107-138. doi: 10.1177/027243169401400203

Zeichner, K. (2009). *Teacher education and the struggle for social justice*. New York: Routledge.

Table 1

Descriptive results of the study variables

	M	*SD*
Emotional support (T1)	5.21	0.87
Instructional support (T1)	3.90	0.92
Classroom organization (T1)	6.39	0.56
Perceived teacher justice (T1)	3.47	0.53
Perceived teacher justice (T2)	3.47	0.54
Perceived teacher care (T1)	3.12	0.63
Perceived teacher care (T2)	2.97	0.66

Table 2

Perceived teacher justice as predicted by observed emotional support, instructional support, and classroom organization.

	Step 1		Step 2		Step 3	
	γ (*SE*)	*df*	γ (*SE*)	*df*	γ (*SE*)	*df*
Fixed effects level 1						
Constant	3.46 (0.02)	1145	3.55 (0.03)***	1142	3.56 (0.03)	1142
Time	-0.01 (0.02)	987	-0.01 (0.02)	987	-0.02 (0.02)	983
Fixed effects level 2 (students in classrooms)						
Sex			-0.14 (0.03)***	1142	-0.14 (0.03)***	1142
SEN			-0.21 (0.05)***	1142	-0.24 (0.05)***	1142
Fixed effects level 3 (between classrooms)						
Emotional support (es)			0.03 (0.04)	57	0.01 (0.04)	57
Instructional support (is)			0.04 (0.03)	57	0.05 (0.03)	57
Classroom organization (co)			-0.03 (0.05)	57	-0.01 (0.05)	57
Cross-level interactions						
SEN * time					0.08 (0.06)	983
Es * time					0.11 (0.04)**	983
Is * time					-0.04 (0.03)	983
Co * time					-0.10 (0.05)*	983
Variances of the random effects						
Initial values of students	0.22		0.21		0.21	
Changes of students	0.22		0.22		0.22	
Initial values of classrooms	0.02		0.02		0.02	
Changes in classrooms	0.01		0.01		0.01	
Residuals	0.04		0.04		0.04	
AIC	3181.68		3159.24		3174.34	
BIC	3232.91		3238.90		3276.73	

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$, two-tailed. SEN = special educational needs (0 = no SEN, 1 = SEN). Control variable is sex (0 = female, 1 = male).

Table 3

Perceived teacher care as predicted by observed emotional support, instructional support, and classroom organization.

	Step 1		Step 2		Step 3	
	γ (*SE*)	*df*	γ (*SE*)	*df*	γ (*SE*)	*df*
Fixed effects level 1						
Constant	3.12 (0.03)***	1145	3.16 (0.03)***	1142	3.16 (0.03)***	1142
Time	-0.16 (0.03)***	986	-0.16 (0.03)***	986	-0.17 (0.03)***	982
Fixed effects level 2 (students in classrooms)						
Sex			-0.09 (0.03)**	1142	-0.09 (0.03)**	1142
SEN			0.14 (0.06)*	1142	0.10 (0.07)	1142
Fixed effects level 3 (between classrooms)						
Emotional support (es)			0.07 (0.05)	57	0.03 (0.05)	57
Instructional support (is)			-0.04 (0.04)	57	-0.02 (0.04)	57
Classroom organization (co)			-0.04 (0.05)	57	-0.02 (0.06)	57
Cross-level interactions						
SEN * time					0.10 (0.07)	982
Es * time					0.17 (0.05)**	982
Is * time					-0.08 (0.05)	982
Co * time					-0.08 (0.06)	982
Variances of the random effects						
Initial values of students	0.32		0.32		0.32	
Changes of students	0.32		0.32		0.32	
Initial values of classrooms	0.02		0.02		0.02	
Changes in classrooms	0.03		0.03		0.03	
Residuals	0.06		0.06		0.06	
AIC	4016.38		4031.19		4043.72	
BIC	4067.61		4110.84		4146.10	

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$, two-tailed. SEN = special educational needs (0 = no SEN, 1 = SEN). Control variable is sex (0 = female, 1 = male).

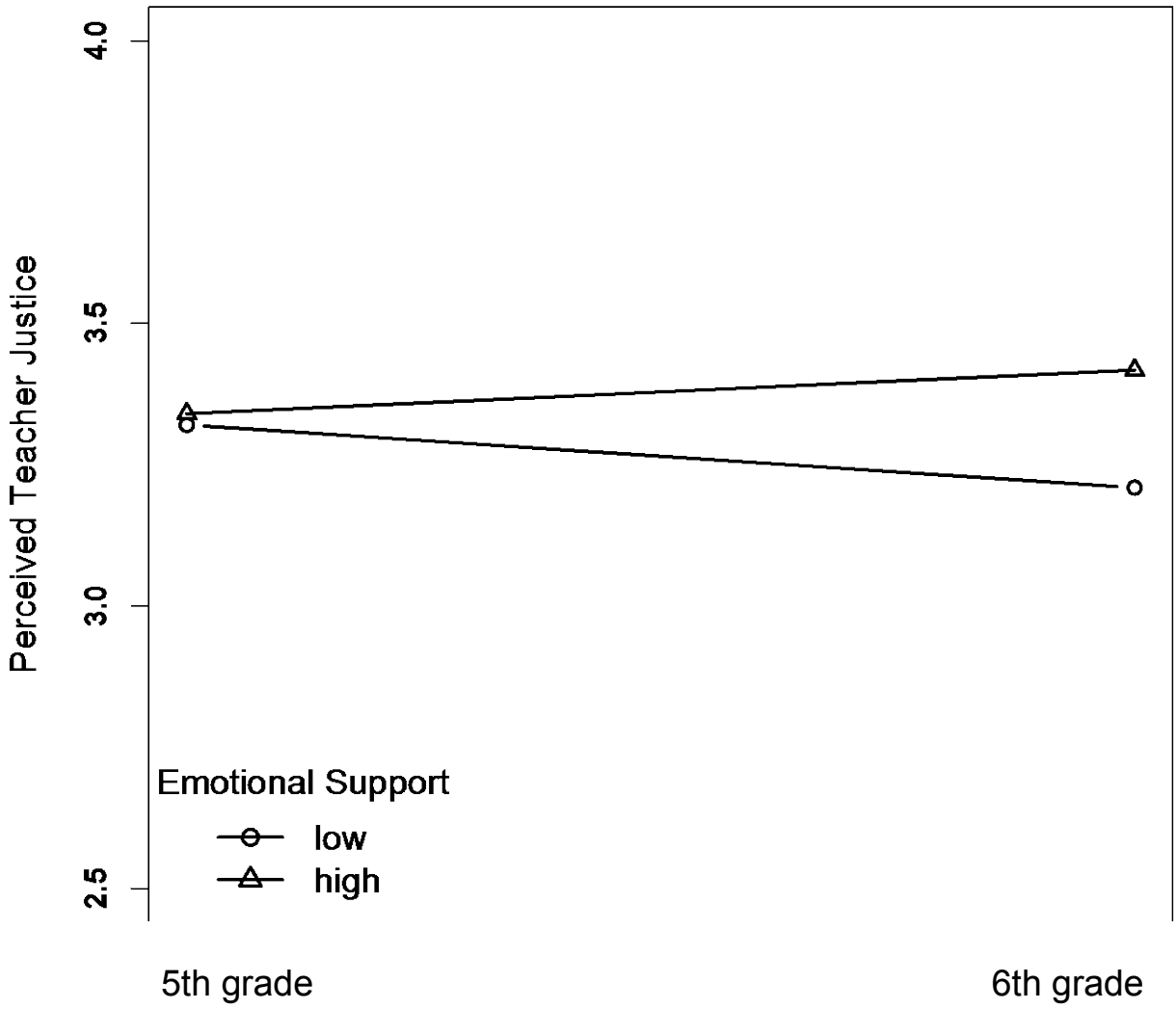


Figure 1. Students' perceived teacher justice in grade five and grade six as a function of observed emotional support from teachers (bold line = significant slope, dotted line = non-significant slope).

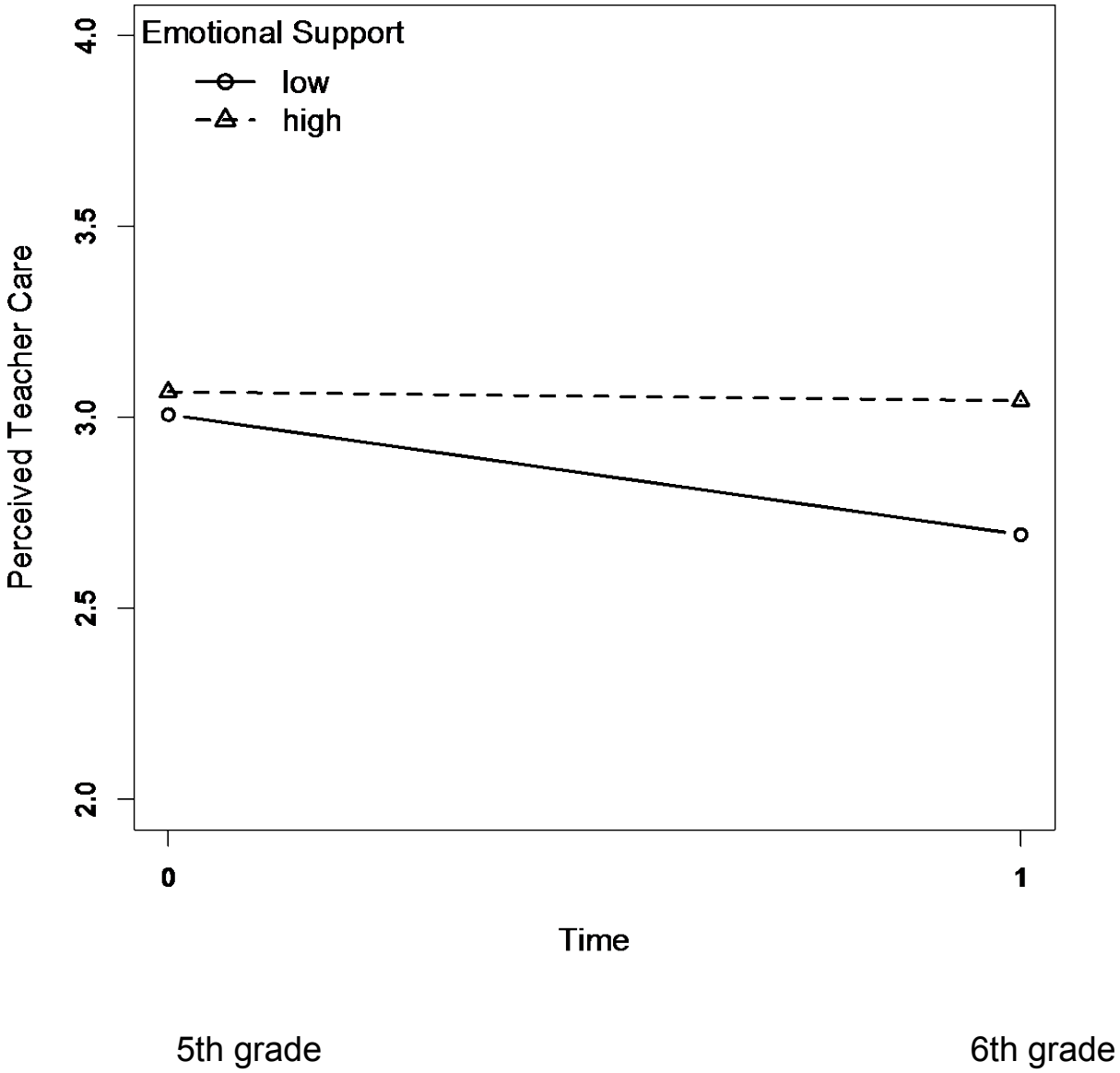


Figure 2. Students' perceived teacher care assessed during grade five and grade six as a function of observed emotional support from teachers (bold line = significant slope, dotted line = non-significant slope).

12 General Discussion

The central goal of this research was to better understand how inclusive school environments would ideally need to be designed to enhance the social participation of all students. To answer this question, this dissertation adopted a multi-level approach and investigated inclusive school environments at three different levels: The dyadic-and peer group level, the individual level, and the classroom-level. For each level, specific questions that are closely related to children's and adolescents' peer group inclusivity were examined. That is, at the dyadic and peer group level, the research studied social participation in inclusive schools with a special focus on friendships between children and adolescents from different social groups. At the individual level, the dissertation aimed to better understand how inclusive intergroup attitudes emerge. Finally, at the classroom level, this research examined the role of the teacher, with a focus on competitive classroom norms and teacher–student interactions.

This chapter integrates the central findings of the dissertation, and is divided into two parts: First, I discuss the findings regarding the individual, and the dyadic and peer group level, as these are closely interlinked. In this section, I focus on students' social participation in inclusive classrooms and specifically address the role of cross-group friendships and socio-moral competencies for peer group inclusivity. Second, I discuss the findings on how the classroom context – and teacher behavior in particular – influences students' socio-moral competencies and socio-emotional adjustment. For each part, the findings of the different chapters are discussed with regard to the current literature, and their theoretical and practical implications. In the conclusion, the findings are integrated to answer the central question of this research on how inclusive school environments should ideally be designed in order to enhance the social participation of all students.

12.1 Social Participation in Inclusive Classrooms: The Role of Cross-Group Friendship and Socio-Moral Competencies for Peer-Group Inclusivity

The first main objective of this research was to gain insight into how inclusive school environments shape children's social relationships. Based on a multi-dimensional framework, I investigated children's and adolescents' social relationships in inclusive classrooms. Furthermore, as students' social participation is influenced by the composition of the classroom (e.g., Chang, 2004; Stormshak, Bierman, Bruschi, Dodge, & Coie, 1999; Thijs &

Verkuyten, 2014), I built on earlier research (Huber, 2009) and studied how classroom diversity in terms of the number of students with and without SEN affects social participation.

The second main objective of this dissertation was to shed light on the conditions and processes under which friendships between students with and without SEN, as well as students from different ethnicities, lead to inclusive intergroup attitudes among children and adolescents. This research focused on the majority group of students without SEN (and in one study the majority group of Swiss students), as social participation of minority group students with SEN (respective the minority group of immigrant students) is difficult to achieve without changing the attitudes of the majority group (Bates, McCafferty, Quayle, & McKenzie, 2015; Mallett, Huntsinger, Sinclair, & Swim, 2008). As most research on cross-group friendships has not taken into account the role of developmental differences, I proposed an integrative process model (see section 3.2), studying the role of children's and adolescents' friendship development and the role of their socio-moral competencies for the development of inclusive intergroup attitudes. The specific assumptions regarding different parts of this model were investigated in different studies (see chapter 2, 3, and 4).

12.1.1 Summary and Integration of the Central Findings

Children's and Adolescents' Social Relationships in Inclusive Classrooms

Chapter 1 demonstrates how various aspects of children's and adolescents' peer relationships differentially predict social participation: While children with SEN were less popular and less included in peer groups than their classmates without SEN, their number of mutual friendships did not significantly differ from their peers without SEN, independent of the intensity and type of their special needs. This finding points to the importance of assessing social relationships in inclusive classrooms within a multi-dimensional framework, as it was proposed by researchers who investigated the development of children's peer relationships (Bossaert, Colpin, Pijl, & Petry, 2013; Gest, Graham-Bermann, & Hartup, 2001; Gifford-Smith & Brownell, 2003; Koster, Nakken, Pijl, & van Houten, 2009; Rubin, Bukowski, & Parker, 2006). With regard to the composition of the classroom in terms of number of the students with and without SEN, the findings suggest that higher classroom diversity enhances the social participation of all the children in the classroom. This finding is in line with previous studies suggesting that children with certain traits (e.g., aggressive behavior) are more accepted in classrooms with a higher number of students with these traits, as the classroom composition provides a descriptive norm on the acceptability of certain behaviors (Chang, 2004; Stormshak et al., 1999). Thus, a higher number of students with SEN may

change the descriptive norm of the classroom, which in turn may increase their social participation.

The findings from chapter 1 demonstrate that children with SEN did not have fewer reciprocal friends than their classmates without SEN. Friendships are highly predictive of children's and adolescents' school adjustment and social development (Hodges, Boivin, Vitaro, & Bukowski, 1999; Ladd, Kochenderfer, & Coleman, 1997); thus, children with SEN in inclusive classrooms may not necessarily be at risk of poor school adjustment as they have reciprocal friends. However, the study outlined in chapter 1 did not specifically focus on who forms friendships with whom. It remains unclear, if children with SEN mostly selected other children with SEN as friends or if they also formed friendships with children without SEN (what this implies for children's social development is discussed in the limitations section 12.1.3).

Friendships Between Children with and without SEN

Friendships between children with and without SEN are important for both children with and without SEN. For children with SEN, children without SEN help them to enlarge their social network and provide important resources for social learning (Garrote & Dessemontet, 2015). For children without SEN, such friendships not only provide opportunities for social learning, but they may also lead to the formation of positive intergroup attitudes (e.g., Grütter & Meyer, 2014). Positive intergroup attitudes, in turn, are a necessary element to increase the social participation of students with SEN (Ainscow, 2009; Bates et al., 2015), as negative intergroup attitudes and stereotypical expectations may lead to social exclusion (Killen, Elenbaas, & Rutland, 2016). If children without SEN form friendships with children who have SEN, positive emotions about this friendship may transfer to the social group of students with SEN in general (Aron, Aron, & Smollan, 1992; Davies, Tropp, Aron, Pettigrew, & Wright, 2011). As a result, children without SEN may become more inclusive towards students with SEN. Chapter 2 and 4 of this dissertation investigated this assumption, whereby these study focused on the developmental period of early adolescence.

The Role of Cross-Group Friendships During Early Adolescence

Early adolescence is a period characterized by high need for belonging and positive shared identities (Teichman, Bar-Tal, & Abdolrazeq, 2007). Moreover, early adolescents are more experienced with groups and thus, more sensitive to group norms and to concerns for group identity (Abrams, Rutland, & Cameron, 2003). As a consequence, older children are more prone to justify the exclusion of a minority group member with concerns for group

functioning (Killen & Stangor, 2001). With regards to the exclusion of children with SEN, group functioning is often considered more important than being fair (Gasser & Malti, 2012; Gasser, Malti, & Buholzer, 2014). The developmental trend of early adolescents' reasoning regarding social exclusion may change as a function of increased peer group sensitivity, and as a result, students with SEN may be more likely to be excluded if early adolescents primarily consider group functioning when making exclusion decisions. To simplify, early adolescents may be more likely to exclude children with SEN due to their strong need for group affiliation and their more complex socio-moral competencies. In contrast to these developmental trends, other trends within friendship development may actually result in more positive intergroup attitudes. During early adolescence, friendships become more intimate, as they become characterized by shared values, reciprocal understanding, and social support (Furman & Buhrmester, 1985; Gummerum & Keller, 2008). This increased friendship closeness may be related to more positive intergroup attitudes during adolescence, as previous studies indicate higher effect sizes with increasing closeness of cross-group friends (Davies et al., 2011; Page-Gould, Mendoza-Denton, & Tropp, 2008). These different developmental processes that characterize early adolescence render this developmental phase ideal for testing different assumptions specified in the process model regarding the development of inclusive intergroup attitudes (see section 3.2).

The Role of Socio-Moral Competencies for Early Adolescents' Intergroup Attitudes

Chapter 2 investigated the first assumption of the process model, namely that positive outcomes of cross-group friendships depend on early adolescents' socio-moral competencies. In this study, socio-moral competencies were operationalized through students' emotions about social exclusion. These emotions reflect an evaluative process of a specific social situation and become more complex during adolescence (Malti, Keller, & Buchmann, 2013). Adolescents may experience mixed emotions when reasoning about social exclusion, which inherently reflect different motivations: Adolescents may experience negative emotions as they consider the negative consequences for the excluded individual (e.g., "X would feel bad, if he was left out."). In comparison, they may experience positive emotions because they want to prevent their in-group from possible impairments (e.g., " It would be less effective for the group to work with X")(Killen & Malti, 2015). Emotions following social exclusion provide information about how adolescents balance these different motivations regarding aspects of fairness versus aspects of group functioning. In this way, adolescents' emotions reflect individual differences in their dispositions to prioritize moral concerns over non-moral concerns (Malti & Krettenauer, 2013).

The findings of chapter 2 show that cross-group friendships with SEN students only related to more inclusive intergroup attitudes if adolescents reported more negative than positive emotions about the exclusion of a hypothetical peer with SEN. In other words, even if students had cross-group friends, they only showed more inclusive attitudes if they considered the negative implications of social exclusion as more important than being in a well-functioning group. Emotions about social exclusion thus reflect important socio-moral competencies that moderate if their friendship with a classmate with SEN will result in more inclusive attitudes towards adolescents with SEN. This finding sheds more light on prior findings from a meta-analysis, where intergroup contact during adolescence did not moderate adolescents' expression of prejudice (Raabe & Beelmann, 2011). To explain this finding, the authors assumed that contextual influences become more important for adolescents' development of prejudice. As adolescents' emotions about social exclusion reflect their considerations of different aspects of a given social situation, future research would benefit from including information about their socio-moral competencies when studying intergroup contact.

The Role of Intergroup Emotions in Early Adolescent's Cross-Group Friendships

In addition to chapter 2, which focused on ***when*** and under which conditions cross-group friendships can result in more inclusive attitudes, chapter 4 investigated ***why*** cross-group friendships can increase positive intergroup attitudes. Extending chapter 2, this study not only longitudinally examined if such friendships relate to early adolescents' intergroup attitudes, but also focused on two emotional processes that characterize friendships during this developmental period: Trust and sympathy. Thereby, I specifically investigated the role of individual change in these emotions because changing emotions do not only enhance the salience of negative aspects of moral transgressions (Arsenio, Gold, & Adams, 2006), they may also be more influential in changing an individual's intergroup attitudes (Fiske & Taylor, 2013). In line with this reasoning, adolescents' number of cross-group friendships with SEN students lead to increased intergroup trust and sympathy over time, and this *change* in adolescents' intergroup emotions predicted more inclusive attitudes towards students with SEN. Moreover, in this study, children's initial levels of intergroup anxiety (i.e., anxiety of interacting with out-group members) negatively related to their intergroup trust, intergroup sympathy, and inclusive attitudes, but were not related to their individual change in trust and sympathy. Lastly, supplementary analyses showed that early adolescents who reported lower trust and sympathy for SEN students were more likely to increase in their trust and sympathy over time. In conclusion, cross-group friendships may be particularly beneficial for

individuals who report greater bias towards SEN students. Taken together, the findings from chapter 4 consider that developmental processes as captured by change (Selig & Preacher, 2009) and highlight why cross-group friendships may relate to more positive intergroup attitudes: Through an increase in adolescents' trust in, and sympathy for, SEN students.

Developmental Differences in Cross-Group Friendships

Trust and sympathy are present in high quality friendships during early adolescence (Gummerum & Keller, 2008; Newcomb & Bagwell, 1995). With regard to different age groups, there may be developmental differences in the characteristics of friendships, whereby these two aspects of friendship quality may be less important for younger children. In contrast to friendships in early adolescence that are mainly characterized by self-disclosure, intimacy, reciprocal understanding, and social support (Furman & Buhrmester, 1985; Gummerum & Keller, 2008), friendships of younger children (i.e. during early and middle childhood) are mainly characterized by mutual engagement and entertainment in shared activities (Parker & Gottman, 1989). Taking into account these different meanings and characteristics of friendships during different developmental periods, study 3 tested the assumption of the process model (see section 3.2) that different friendship characteristics uniquely predict inclusive intergroup attitudes during specific developmental periods.

In contrast to the other two chapters on students' cross-group friendships (chapter 2 & 4), chapter 3 focused on friendships between Swiss and immigrant students and Swiss student's attitudes towards including immigrant students into social activities for two reasons: First, inclusive schools not only include students with different learning needs but also students of different ethnicities, whereby on average, nearly one third of the students in a class are not of Swiss nationality (Bundesamt für Statistik [BFS], 2015). Second, with regard to students' development of their social identity, research has shown that ethnicity is a salient social category from early on in life, while more complex categories develop later (Bigler & Liben, 2007; Killen & Rutland, 2011). Early adolescents have a more complete understanding of disabilities than younger children (Gasser, Chilver-Stainer, & Tempelmann, 2013; Magiati, Dockrell, & Logotheti, 2002; Smith & Williams, 2001); thus, it could be that special educational needs or different handicaps that are included in this term are not yet well understood by younger children. While salient social categories like physical or sensory disabilities are salient to children at early ages (Diamond & Hestenes, 1996), specific learning disabilities that reflect the largest percentage of students with SEN, are better understood and become more salient in 10- to 12-year-olds as compared to younger children (Gasser, Chilver-Stainer, et al., 2013; Magiati et al., 2002; Smith & Williams, 2001).

In short, as the study in chapter 3 included a comparison between early adolescents and older children (i.e., 7-9 years olds) with regard to their cross-group friendships, the study investigated a social category that is perceptually salient for children at younger ages: Ethnicity. Extending research on cross-group friendships within a developmental framework, the results showed that only mutual trust, but not shared activities (i.e. playing / hanging out together), related to more inclusive attitudes towards immigrant students among older children and early adolescents.

The Role of Trust for Children's and Adolescents' Cross-Group Friendships

These findings from chapter 3 again highlight the role of trust for children's and adolescents' intergroup attitudes and imply that shared activities between Swiss and immigrant students may not be enough in order to promote more positive intergroup attitudes. Only friendships of high quality, reflected by mutual trust, can promote more tolerance for students from other ethnicities among Swiss students. However, contrary to the process model assumption, the study findings did not reveal any age differences with regard to the role of trust for students' intergroup attitudes. As trust becomes a more important characteristic for friendships during late childhood (Kahn & Turiel, 1988), it may therefore already be significant in older children's cross-group friendships. While trust was operationalized as a characteristic of friendship in chapter 3, chapter 4 investigated intergroup trust (i.e., trust in the out-group). Taking the findings of these two studies together, friendships that are characterized by mutual trust between students from different social groups reflect friendships of high quality that may promote higher changes in students' intergroup emotions, and specifically, trust in the out-group. In line with this reasoning, prior research with adults shows that cross-group friendships are beneficial for positive intergroup attitudes because they enhance trust in the out-group as a whole (Tam, Hewstone, Kenworthy, & Cairns, 2009; Turner, Hewstone, & Voci, 2010).

Conclusion

Taken together, the findings of the different studies shed more light on children's and adolescents' social relationships in inclusive classrooms and specifically highlight the role of cross-group friendships for children's and adolescents' development of inclusive intergroup attitudes. How these findings advance previous theories on children's social relationships and their development of intergroup attitudes is discussed in the next section.

12.1.2 Theoretical Implications

This dissertation has several implications for prior theories which are outlined in the following paragraphs.

1. Social Participation as a Multi-Dimensional Construct

The findings of chapter 1 emphasize that social participation should be considered a multi-dimensional construct with different aspects of social relationships. As most of the research on children's social relationships relies on methods of social network analysis, researchers need to consider how these different aspects are operationalized with different measures, and more importantly, how these measures relate to the concepts of social inclusion and social participation. Most studies have investigated social acceptance as a central part of social participation (Koster et al., 2009). According to the definition of the OECD, social inclusion implies that social interactions between students with and without SEN are maximized (Organisation for Economic Co-operation and Development [OECD], 1995). Consequently, research on children's social participation in inclusive classrooms needs to take into account that popularity does not necessarily represent interactions between children, but reflects a child's acceptance by the larger peer-group (Gifford-Smith & Brownell, 2003). As the findings of this research and previous studies (e.g., Parker & Asher, 1993) show, popularity and friendships do not necessarily relate to each other. Children can be unpopular, but still be part of reciprocal friendships. To conclude, when applying methods of social network analysis, it is important to consider which part of social relationships a specific measure examines. As social interactions have various forms, research on social participation in inclusive classrooms needs to adopt a holistic perspective of students' interactions and social relationships. Recently, scholars have proposed four key aspects of social participation in inclusive classrooms: Social acceptance by classmates, feelings of social acceptance, having friends, and having positive social interactions with classmates (Bossaert et al., 2015; Koster et al., 2009). However, these four categories have certain limitations: First, they are not necessarily distinctive, as friendships by definition imply a minimum of positive social interactions (Hartup, 1996; Rubin et al., 2006). Second, the literature suggests that children with SEN overestimate their own social standing (Avramidis, 2013; Nowicki, 2003), and third; children's feelings of social acceptance are mainly a result of their peer relationships, whereby different aspects of social relationships may have a unique role in predicting children's feelings of acceptance (Gifford-Smith & Brownell, 2003). Lastly, even though this framework has been proposed, few studies have examined social participation based on a multi-dimensional approach (Gifford-Smith & Brownell, 2003).

This dissertation adopted a different framework and studied social participation in inclusive classrooms as reflected by three aspects: Popularity, friendship, and peer group inclusion. Those three aspects of social relationships were chosen because extensive evidence shows that these types of peer interactions are related to different developmental trajectories of socio-emotional and academic adjustment (Gest et al., 2001; Gifford-Smith & Brownell, 2003; Ladd et al., 1997; Rubin et al., 2006). Thus, future research on social participation in inclusive classrooms could benefit from studying the school adjustment of children with SEN in relation to these different aspects of social relationships.

2. Social Participation as a Non-Linear Process

Moreover, as the findings from chapter 1 show, social participation is not a linear process: Being popular does not necessarily mean that a child has mutual friends, and having mutual friends does not guarantee peer group inclusion. This finding is in line with Gest et al. (2001) who showed that success in one dimension of peer relationships does not necessarily relate to success in the other dimension, despite moderate correlations between the different dimensions. However, it can be assumed that the three aspects of social relationships are interrelated, as skills that are necessary for general peer acceptance also relate to healthy friendship development (e.g., pro-social skills) and that these skills also relate to a child's competency to manage relationships in larger peer networks (Gest et al., 2001; Gifford-Smith & Brownell, 2003).

Still, to date it is not yet well understood how these different aspects of social relationships relate to each other (Gifford-Smith & Brownell, 2003). For example, do children with SEN have higher chances to become more popular if they have popular friends? Moreover, research shows that friendships can play a protective role for children who experience exclusion or victimization (Malcolm, Jensen-Campbell, Rex-Lear, & Waldrip, 2006). Consequently, friendships may still predict peer adjustment even if adolescents only have few friends and inherit low social positions in their classroom (Waldrip, Malcolm, & Jensen-Campbell, 2008). Understanding more closely how these different processes in the formation of peer relationships are interdependent in their development and how their combination predicts children's socio-emotional and academic adjustment could thus inform the design of interventions to enhance students' social participation.

3. The Role of Classroom Composition in Terms of the Number of Students with SEN

Lastly, an additional theoretical implication of chapter 1 is that it emphasizes that children may be more accepted in classrooms with a higher number of students with SEN. Thus, it can be concluded that future research on social participation in inclusive classrooms

should take into account the composition of the classroom. However, as will be discussed in the next section (see section 12.1.3), the study had certain limitations that can be addressed in future studies.

4. An Integrated Process Model on the Role of Socio-Moral Competencies and Cross-Group Friendships for Peer Group Inclusivity

If children with and without SEN or children from different ethnic backgrounds form friendships with each other, this can result in more positive intergroup attitudes, which can in turn promote peer group inclusivity. Based on current research in social psychology and developmental science, I proposed an integrative process model that takes into account developmental differences in children's and adolescents' socio-moral competencies and developmental differences in the meaning and functions of friendships.

With regard to the role of socio-moral competencies, the model proposed that positive intergroup attitudes not only depend on children's and adolescents' intergroup contact, but also on their socio-moral development. This assumption was based on the social reasoning development model (Rutland, Killen, & Abrams, 2010), which assumes that the development of peer group inclusivity depends on two different developmental trajectories. On the one hand, children's development of social identification with groups, their knowledge about stereotypes, and their understanding of groups shape children's decision to include or exclude peers based on their group-membership. Thereby, children may either choose to exclude an individual from an out-group because they want to maintain a positive view of their own in-group (Abrams & Killen, 2014), because they hold negative stereotypes towards the social group that this peer represents, or because that individual does not comply with norms of the in-group. On the other hand, children aim at being fair and inclusive and avoid social exclusion of an individual based on group-membership as this conflicts with principals of fairness (Rutland et al., 2010). However, in certain situations, children may choose to comply with the norms of their in-group over being fair: Mostly, if the inclusion of an out-group member would negatively affect effective group functioning (Killen, Elenbaas, & Rutland, 2016). How children balance these conflicting demands is expressed in their inclusion decisions. The SRD model further specifies three conditions that may attenuate children's exclusionary behavior, one of which is intergroup contact (Rutland et al., 2010).

However, regarding intergroup contact, these two developmental processes that predict children's exclusionary behavior have not been integrated. If children's socio-moral competencies predict how they balance different conflicting concerns when reasoning about social exclusion, it would be too simple to assume that intergroup contact relates to more

inclusive attitudes, regardless of how children weigh moral (i.e., being fair) versus socio-conventional (i.e., being in a well-functioning group) demands in intergroup situations. The finding of chapter 2 thus extends the SRD model by demonstrating that positive consequences of cross-group friendships depend on early adolescents' socio-moral competencies: Only under the condition that early adolescents anticipate more negative than positive emotions when an out-group member is excluded, the quality of their cross-group friendships predicts their inclusive intergroup attitudes. This finding further supports the assumption that the two developmental processes of socio-moral development and the development of children's intergroup relations are closely linked (Killen et al., 2016), at least in the developmental period of early adolescence. As outlined above, the period of early adolescence is characterized by a strong need to belong to peer groups and a sophisticated understanding of how peer groups work (Hitti, Mulvey, Rutland, Abrams, & Killen, 2014; Killen et al., 2016; Teichman et al., 2007). At the same time, early adolescents express more negative emotions if an out-group member is excluded and show a high need for principles of fairness (Killen et al., 2016; Malti et al., 2012). How early adolescents balance these conflicting needs is expressed in their exclusion decisions (Killen et al., 2016), even under the condition that adolescents have close out-group friends.

However, despite its novel insights into how the different components of the SRD model may be interlinked, chapter 2 did not investigate developmental trajectories, as this study only had a cross-sectional design. Chapter 4 thus extended chapter 2 and focused on developmental processes, which may explain why cross-group friendships can still change early adolescents' intergroup attitudes. Importantly, chapter 4 highlights the role of individual *change* for the development of positive intergroup attitudes. Thereby, this research does not only advance prior research on intergroup contact, which mainly examined assumptions regarding processes in cross-sectional designs (Swart, Hewstone, Christ, et al., 2011), but also points to the importance of investigating developmental processes with models that account for how individuals change over time (Selig & Preacher, 2009). Moreover, the findings of study 4 extend the theoretical assumptions of the SRD model, as they show that cross-group friends can longitudinally promote enhanced trust in, and sympathy for, out-group members, and that this change in trust predicts more inclusive attitudes over time. Sympathy reflects feelings of concern for others' states (Eisenberg, Eggum, & Di Giunta, 2010), and thus has a strong moral component. Similarly, trust encompasses aspects of morality in relationships, such as the expectation that the other will not cause harm, but instead will be confidential, keep promises, and will tell the truth (Rotenberg, 2010). Thus, high levels of trust in a specific

person reflect confidence that the other will not violate principles of fairness and other's welfare. In short, both sympathy and trust reflect moral considerations of how to threat others in interpersonal relationships. Chapter 4 shows that early adolescents with cross-group friends have increased sympathy for and trust in out-group members; thus, this dissertation suggests that cross-group friendships may promote socio-moral competencies with regard to how to treat out-group members, as reflected in the two intergroup emotions of sympathy and trust. Moreover, this change in early adolescents' intergroup emotions may be of particular importance, as changing emotions increase the salience of negative aspects of moral transgressions (Arsenio et al., 2006).

Taken together, the findings of this dissertation advance the SRD model by taking into account the interplay of early adolescents' socio-moral competencies, the development of their understanding of intergroup relations, and the role of their own intergroup relations (i.e., their cross-group friendships). Further research needs to shed more light on how these different processes depend on each other, also with regard to other developmental periods. For example, cross-group friendships relate to how children and adolescents reason about social exclusion. Children and adolescents with a cross-group friend rate social exclusion based on group membership as more wrong than children without such a friend, and provide more moral reasons for why not to exclude an out-group member (e.g, Brenick & Killen, 2014; Ruck, Park, Crystal, & Killen, 2015). However, at the same time, seventh or tenth graders with higher levels of intergroup contact also use more social-conventional reasons for explaining the exclusion of an out-group member, because the inclusion would be detrimental for keeping the in-group's identity intact (Ruck et al., 2015). These findings show that, during adolescence, cross-group friendships may promote a more nuanced moral reasoning in intergroup contexts, which may not necessarily lead to higher peer group inclusivity. Furthermore, although cross-group friendships may longitudinally lead to the anticipation of higher sympathy when an out-group member is excluded, adolescents' reasoning and emotions about social exclusion still have a strong situational component and are context- and domain-specific (Killen & Malti, 2015). In other words, although having close out-group friends may change how adolescents reason and feel about social exclusion, adolescents' decision whether to include an out-group member still depends on the situational context. Thus, the relationship between children's and adolescents' cross-group friendships, socio-moral competencies, and their intergroup attitudes may be more complex than previously assumed and warrants more attention in future research.

Furthermore the proposed model extends the SRD model by taking developmental differences in children's and adolescents' friendships into account. Although there were no age differences in how mutual activities and mutual trust between Swiss and immigrant students predicted Swiss students' inclusive intergroup attitudes, the research on friendship development provides clear evidence for change in friendship characteristics from early childhood to late adolescence (Newcomb, Bukowski, & Bagwell, 1999; Rubin et al., 2006). Thus, with regard to different age groups and a more extensive focus on children's and adolescents' friendship characteristics, this specific assumption of the process model may still provide more insight into how developmental changes in children's and adolescents' friendships predict their development of positive intergroup attitudes. The findings from chapter 3 suggest, that for individuals in late childhood and early adolescents, simply playing or hanging out with immigrant students may not be enough to promote inclusive attitudes towards immigrant students. For both age groups, mutual trust seems to be a key component in predicting intergroup attitudes. Trust reflects an important aspect of relationship quality as it is closely related to closeness and loyalty in friendships among older children and adolescents (Newcomb & Bagwell, 1995); this suggests, that only high quality friendships may result in positive intergroup attitudes. Despite the finding that trust is strongly related to pro-social behavior (Malti et al., 2016), little is know about the role of trust in intergroup contexts. Thus, the findings of this research provide new insights into the role of trusting relationships among children and adolescents for their intergroup attitudes.

Taken together, a promising avenue for future research may be to study the co-development of children's and adolescents' friendship formation, socio-moral competences, and their intergroup attitudes longitudinally.

12.1.3 Limitations and Directions for Future Research

Despite the various theoretical advancements, this dissertation is not without limitations. These limitations are discussed in the following sections.

1. Developmental Differences in Students' Peer Relationships

First, although the study in chapter 1 included age as a control variable, it did not investigate potential differences in how the three different aspects of social relationships predict students' inclusion within different age groups. However, as outlined above, there are developmental differences in the meaning of friendships and the importance of peer groups. While friendships seem to predict children's socio-emotional adjustment in every age group (Gifford-Smith & Brownell, 2003; Rubin et al., 2006), their functions and meanings change.

Thus, depending on the investigated friendship characteristics, children at different ages could have fewer or more reciprocal friendships. In other words, how friendship is measured could affect if there are any differences between students with and without SEN during different developmental periods. Moreover, as friendship quality seems to be more predictive of early adolescents' socio-emotional adjustment than the number of friends (Waldrip et al., 2008), future research needs to take into account how different aspects of friendship quality predict school adjustment for different age groups. With regard to peer groups, it can be assumed that peer group centrality becomes a more important aspect of inclusion for older children and early adolescents (Gifford-Smith & Brownell, 2003); thus there may be different levels of peer group inclusivity for older children and early adolescents with SEN than for younger children. Taken together, a more complete picture of how different aspects of peer relationships develop and how these age-related changes predict children's and adolescents' social and academic adjustment is needed to draw a more complete theory of peer functioning.

2. The Social Structure of Classroom Social Networks

Second, while the study in chapter 1 accounted for three different aspects of peer relationships in the same analysis, the study did not take into account the social structure of the classroom networks in which peer relationships are embedded. For example, children may have more opportunities to socially participate if they are part of a classroom in which children are closely linked with each other. Conversely, students with SEN may face a higher risk for social exclusion in school classes, in which more children are isolated, as the results from a recent study suggests (Garrote, 2016). Moreover, if a school class is characterized by a strong social hierarchy, some children may have little social power in their peer group and relational processes may reinforce their low social standing (Mikami, Lerner, & Lun, 2010). In conclusion, the social structure of the classroom may enhance or limit opportunities for students to participate in peer activities. Thus, when analyzing social relationships, the structure of the social network needs to be taken into account.

3. Cross-Sectional Study Design

Third, the first chapter cannot make any conclusions for children's and adolescents' development of their peer relationships in inclusive classrooms, as this was a cross-sectional study. For example, prior longitudinal research in inclusive classrooms showed that while students with SEN had fewer friends at the beginning of the academic year, there was no difference by the end of the school year (Vaughn, Elbaum, & Schumm, 1996). Thus, over time, students with SEN managed to build more mutual friendships. These changes in one

domain of social relationships may also bring about changes in other dimensions of social relationships (e.g., participation in peer groups). Thus, a multi-dimensional, longitudinal research approach that can assess changes in these different domains simultaneously is warranted.

4. Homophily in Friendship Choices and Implications for Students' Socio-Emotional and Academic Adjustment

Moreover, as previously mentioned, it remains unclear, who students with SEN choose to be their friends. Evidence from research on children's peer relations strongly suggests that friendships between students form based on similarity. This suggests that children who are similar with regard to social categories (e.g., ethnicity and gender), psychological characteristics, and social behavior or individual traits are more likely to become friends (Byrne, 1971; McPherson, Smith-Lovin, & Cook, 2001; Newcomb et al., 1999; Poulin et al., 1997). Thus, students with SEN may favor students with SEN as friends, and students without SEN may prefer students without SEN as friends. However, in inclusive classrooms, students with SEN may still be grouped together during specific lessons (i.e., students are educated in groups according to their ability level); thus students with SEN are spending more time together and are more likely to befriend other students with SEN (Wiener & Schneider, 2002). This so-called homophily effect is a well-investigated phenomenon, whereby research has shown that children's friendship choices have a strong influence on their socio-emotional and academic adjustment. Therefore, friendships do not only form based on similarities, but friends also tend to become more similar to each other over time (Veenstra & Dijkstra, 2011). Socially competent children are characterized by higher friendship quality and promote pro-social behavior in one another (e.g., Brendgen, Bowen, Rondeau, & Vitaro, 2001). In contrast, friendships between children with aggressive behavior are less intimate and reflected by higher levels of conflict. These friendships may therefore reinforce each other's antisocial behavior (Poulin et al., 1997; Vitaro, Tremblay, Kerr, Pagani, & Bukowski, 1997). Regarding children with SEN, some scholars assume that students with SEN have lower social skills than their typically developing classmates (Frostad, Mjaavatn, & Pijl, 2011; Mand, 2007). Thus, children with SEN may feel more comfortable interacting with other children who have similar levels of social skills (Koutsouris, 2014). However, as outlined above, depending on the quality of these friendships, they may not be beneficial for the social development of students with SEN. For example, Wiener and Schneider (2002) found higher levels of conflict and lower levels of validation in friendships among students with SEN. On the contrary, scholars also propose that being around other students with SEN may be important for

promoting the development of a shared social identity in children with SEN. This so-called disability identity is believed to help people in adapting to stressful events that may be related to disability (Dunn & Burcaw, 2013; Stainback, Stainback, East, & Sapon-Shevin, 1994). Thereby, friendships between students with SEN in inclusive classrooms may help students with SEN to adapt and adjust to their handicaps.

Taken together, future research needs to investigate the characteristics of friendships between students with SEN, and students with and without SEN, and investigate how they predict children's socio-emotional and academic adjustment in inclusive classrooms.

5. A More Nuanced Investigation of the Role of Classroom Diversity for Social Participation

To summarize, longitudinal research is needed to further analyze how friendships between students in inclusive classrooms form over time and focus on the role of different individual characteristics within students' peer relationships. Furthermore, since the social context influences how relationships form, future research would benefit from studying the role of classroom diversity for students' peer relationships in inclusive classrooms. The results from chapter 1 show that increased diversity relates to higher average social participation of the students in a classroom. However, as evident from the previous discussion, this average higher inclusion does not necessarily reflect that students with SEN become more included, since this simple average inclusion measure does not reflect the complexity of children's and adolescents' social relationships. Thus, it remains to be determined in future research how diversity influences the formation of friendships between children in inclusive school classes. Moreover as the social participation of children with specific behaviors or traits also depends on the specific traits of popular children (according to the norm salience approach; Dijkstra & Gest, 2015), this research needs to look at other contextual influences on the formation of children's social relationships that go beyond classroom diversity.

6. Special Needs as a Broad Social Category

The term SEN represents students with a variety of different types of special educational needs, ranging from physical disabilities, intellectual disparities, and delayed social-emotional development (Powell, 2006). According to the Swiss educational system, the term SEN is reserved for students who receive additional assistance from a teacher with special competencies in special needs. This assistance can range from a few hours a week of additional support to highly specialized and intensive support by an SEN teacher with specific competencies (e.g., a child who is blind and needs to have all the material translated to braille). These different needs may be judged differently by children, whereby children with

socio-emotional difficulties (e.g., aggressive or hyperactive behavior) are seen as extremely negative by their peers (Hoza, 2007). Moreover, children's attitudes towards students with intellectual disabilities or lower academic achievement are also negative, as suggested by meta-analytic results (Bless, 2007; Nowicki & Sandieson, 2002). Thus, it could be argued that cross-group friendships may not have the same effect on children's inclusive attitudes, depending on the type of needs of the cross-group friend. However, in line with the idea that inclusion means accepting every student regardless of his or her special needs (Lindsay, 2007), the studies in this research program regarding early adolescents' cross-group friendships did not differentiate between different types or levels of SEN. Furthermore, as chapter 2 shows, only 9% of students with SEN had diagnosed delays in their socio-emotional development; the vast majority of students with SEN had learning difficulties. Nevertheless, to strengthen the SEN criteria, chapter 4 only included students with SEN who belonged to the lowest 20% of the sample in their academic achievement. In addition, I assumed that the additional help of the SEN teacher would be sufficient for the classmates to perceive the special needs of a student. The finding of chapter 1 supports this assumption, as it shows that students with low levels of SEN (i.e., students with only a few lessons of additional support per week) were less popular and less included in peer groups than their classmates without SEN. Thus, it can be assumed that students are sensitive in their perception of learning differences. Lastly, as outlined above, how a specific behavior is evaluated by children, depends on the social context (e.g., the composition of the classroom, the behaviors and traits of popular children).

7. Do Special Educational Needs Reflect Individual Traits or a Social Category?

Social exclusion researchers distinguish between interpersonal and intergroup exclusion. While interpersonal exclusion reflects the rejection of an individual based on individual traits, such as shyness or aggression, intergroup exclusion describes the exclusion of individuals based on their group membership (e.g., gender, nationality) (Killen, Mulvey, & Hitti, 2013). This distinction aims at integrating research on social exclusion and research on peer relations. Research on peer relations has mainly studied how children's social relationships form depending on children's traits (Gifford-Smith & Brownell, 2003). Social exclusion research focuses on the rejection of children based on their social group membership and negative stereotypes and attitudes that are ascribed to the social group (Killen, Mulvey, et al., 2013). However, this perspective acknowledges that negative individual traits may also be ascribed to a certain social group (e.g., all boys are aggressive).

Whether the exclusion of students with SEN reflects rejection based on certain traits (e.g., low-achievement) or based on group membership should be discussed critically. An important question is whether special educational needs reflects a salient social category that shapes how children organize their peer relationships. According to Phinney (2008), the social context influences which categories are meaningful to children. The findings of the qualitative pre-study in chapter 2 suggest that learning differences, which constitute the central criteria of SEN, represent meaningful criteria to differentiate between students. In other words, students in inclusive classrooms are sensitive in their perception of learning differences. This finding is in line with other research that shows that academic achievement is a salient criteria that influences how children organize their peer relationships (Kiuru, Nurmi, Aunola, & Salmela-Aro, 2009; Shin & Ryan, 2014). According to the cognitive developmental model (Bigler & Liben, 2007) four different processes drive the formation of prejudice: First, an attribute needs to be salient to children; second, an individual needs to fit that salient category; third, children need to be aware of or develop stereotypes regarding that category; and forth, they need to apply this stereotype to the individuals.

The following statement by a participant of the second study of this dissertation shows that students hold stereotypes that are applied to students with low academic achievement: “I am getting nervous if I work with people like Petra [child with SEN] because they are slow and doing poorly.” In addition, children use more negative and less positive descriptions for children with learning disabilities than for children without learning disabilities and they show less desire to include these hypothetical children with learning disabilities into group activities (Nowicki, 2011). Lastly, there is meta-analytic evidence that children evaluate students with intellectual disabilities or lower academic achievement negatively (Nowicki & Sandieson, 2002).

However, as children with SEN do have difficulties in learning, SEN does not reflect a clear social category, such as nationality, where it is, for example, clearly stereotypical to assume that all immigrant students are not performing well in school. Moreover, some students with SEN may also have delays in their socio-emotional development. Taken together, there is some overlap between personal traits and stereotypes that are ascribed to children with SEN, when children reason about whether to include or exclude a child with SEN into social activities. Nevertheless, in order to increase the social participation of students with SEN in inclusive classrooms, it is important to understand how their classmates without SEN balance concerns for optimal group functioning (that may represent a mix between stereotypes and real difficulties of a certain student) with concerns of fairness.

Furthermore, to have a holistic picture of peer group inclusivity, it is important to combine research on children's peer group relations and research on social exclusion.

8. The Role of Peer Group Norms

Children's and adolescents' decisions to include or exclude also depend on their understanding and compliance with peer group norms (Abrams, Rutland, Pelletier, & Ferrell, 2009; Hitti, Mulvey, Rutland, Abrams, & Killen, 2014). Particularly during early adolescence, students become more attached to peer groups and have a more nuanced understanding of peer group norms (Horn, 2003; Killen, Rutland, Abrams, Mulvey, & Hitti, 2013). Research shows that children and adolescents have higher intentions to negatively treat an out-group peer if their peer group has an exclusion norm (Nesdale, Durkin, Maass, Kiesner, & Griffiths, 2008). Furthermore, children do not only exclude out-group members, but also in-group members who do not comply with the norm of the in-group, and as a result, they are more likely to include an out-group member who does comply with the in-group norm (Abrams et al., 2009; Hitti et al., 2014; Killen, Rutland, et al., 2013). Moreover, early adolescents are able to distinguish social-conventional (i.e., wearing a specific club shirt) and moral peer group norms (i.e., allocating resources equally) and find it more legitimate to exclude a member who deviates from a social-conventional norm as compared to a moral norm (Hitti et al., 2014). Taken together, group norms may be more important for early adolescents' inclusion decisions than preserving in-group identity. For example, individuals would include a boy into a girls' group if that boy is more willing to behave in line with the in-group norm (e.g., wearing a specific shirt) than a girl (Killen, Rutland, et al., 2013). Consequently, future research on children's social relationships and socio-moral competencies in inclusive classrooms needs to take into account the role of children's understanding of group norms and their willingness to comply with these norms. For example, Feddes, Noack, and Rutland (2009) showed that cross-group friendships between German and Turkish children predicted more positive out-group evaluations over time, partly because children perceived it as more acceptable to have out-group friends.

9. Missing Perspective of Minority Group Students

Research on children's and adolescents' reasoning and emotions about social exclusion suggests that students from social minority groups may think and feel differently about social exclusion. For example, Serbian minority group students in Switzerland are less likely to support exclusion based on nationality than Swiss majority group members. In addition, minority group members attribute more positive emotions (i.e., pride) to Swiss majority group children who exclude a Serbian child from visiting a soccer game (Malti et al., 2012). These

children may have greater experience with exclusion and discrimination and thus, a different perception of social exclusion. To date, there is little research on how ethnic minority group members feel and reason about exclusion and it has not been investigated how children with SEN feel and reason about social exclusion. However, to prevent the negative consequences of social exclusion, it is also important to understand the perspective of minority group children. The results of chapter 5 provide a first glance into how students with low academic achievement perceive social exclusion. These children expected less exclusion and were less likely to justify exclusion with considerations of group functioning. These findings suggest that students who do not conform to the stereotype of well-achieving children may be more sensitive to issues of social exclusion.

Furthermore, prior research on children's and adolescents' cross-group friendships shows that intergroup contact can have differential effects for minority group members than for majority group members. These studies show that intergroup contact is more effective among majority than among minority group members (Aboud, Mendelson, & Purdy, 2003; Feddes et al., 2009; Pettigrew & Tropp, 2006; Tropp & Prenovost, 2008). However, studies have also found that cross-group friendships may help ethnic minority group students identify with the host society, which in turn is related to improved attitudes towards the majority out-group (Munniksma, Verkuyten, Flache, Stark, & Veenstra, 2015). In addition, cross-group friendships may have positive implications for the socio-emotional adjustment of ethnic minority group students (Graham, Munniksma, & Juvonen, 2014; Munniksma & Juvonen, 2012). As previously discussed, cross-group friendships may also be beneficial for the socio-emotional and academic adjustment of students with SEN (Rubin et al., 2006). However, such positive outcomes may depend on the quality of the friendship (Waldrip et al., 2008).

There has not been much research on how minority and majority group students perceive the quality of their friendship; a study by Aboud et al. (2003) indicates that cross-ethnic friendships are less stable and less intimate as compared to same-ethnic friendships, but do not differ in characteristics of perceived loyalty and emotional security. Little is known how children with SEN perceive the quality of their friendships. Research found higher levels of conflict and lower levels of validation in the friendships of SEN children (Wiener & Schneider, 2002). However, this research did not specifically focus on friendship quality of friendships between students with and without SEN. As higher perceived friendship quality positively predicts children's well-being, self-worth, and adjustment to school (Furman, 1996), it is important to better understand how children with SEN and immigrant children perceive their cross-group friendships. This research would need to take into account possible

sex differences, as previous studies have revealed higher intimacy levels for girls than boys (e.g., Malcolm et al., 2006).

Taken together, focusing on how students of social minority groups perceive their cross-group friendships may be important for several reasons: First, to determine how these friendships emerge; second, to find out how these friendships are characterized in terms of their quality; and third, to better understand how they relate to more positive intergroup attitudes.

10. The Formation of Cross-Group Friendships and Children's and Adolescents' Intergroup Attitudes

Research has not yet investigated, within a longitudinal perspective, how the formation of peer relationships relates to children's and adolescents' development of their socio-moral competencies and the development of their intergroup attitudes. Thus, a complete picture of the developmental processes that shape children's and adolescents' inclusion decisions, is still missing. Studying the co-development of these three developmental processes with a social network approach in inclusive classrooms may provide new insights into how inclusive school environments shape children's and adolescents' social development.

12.1.4 Practical Implications for Inclusive Education

The findings of this dissertation can inform educational practices in inclusive classrooms, which are discussed in the following subsections.

1. Informing Teachers About the Risk for Students with low Academic Achievement

The central goal of inclusive education is to enhance the social participation of all children, regardless of their socio-emotional and academic development or their social and ethnic background (Ainscow, 2009; Lindsay, 2007). While the findings of chapter 1 show that children have equal numbers of friends regardless of their special educational needs, the findings also indicate that children with SEN are less popular and less included in peer groups than children without SEN. Thereby, even children with mild levels of SEN are not participating. These children mostly do not have an official SEN status and are assigned only a few specific lessons of additional support by an SEN teacher; thus, their special needs are likely to be overseen. A previous study on teaching behavior in inclusive classrooms indicates that teachers provide richer instructions for students who have an official SEN status, but not for non-SEN status students who are at risk of poor achievement (Jordan, Schwartz, & McGhie-Richmond, 2009). An important implication of this finding is to inform teachers about the risks for students who have low academic achievement or specific learning needs in

a certain subject and do not have an official SEN status. If teachers are aware that students may be excluded because of their low academic achievement, they can specifically attempt to enhance the social participation of these students.

2. Providing Teachers with a More Comprehensive Understanding of how Social Relationships Form

If teachers understand how social relationships in their classroom form, they can specifically prevent or address issues of social participation. For example, based on the norm salience approach (Dijkstra & Gest, 2015), popular children influence which behaviors are accepted in a classroom. Teachers can find out which traits or behaviors are seen as "cool" by the majority of the children and try to highlight these behaviors in unpopular students. However, teachers need to be careful not to act in an obvious or artificial way and instead try to accentuate specific traits or behaviors in their interactions with students. As outlined previously, students are highly sensitive to how the teacher interacts with their classmates and infer from these interactions how to evaluate and treat a child with a specific behavior or trait (Huber, 2011; Mikami et al., 2012). For example, if teachers criticize students with SEN in front of their peers or show disliking towards these peers, these children are less socially accepted by their classmates (Chang et al., 2004; Huber, 2011; McAuliffe, Hubbard, & Romano, 2009). To put it differently, if teachers show positive and respectful behavior towards all their students, this can benefit their social participation. How specific teacher behavior in inclusive classrooms affects the social development of students with SEN is discussed in more detail in section 12.2.1.

3. Promoting Cross-Group Friendships Among Students

The findings from chapter 1 imply that different dimensions of social participation can be targeted. Thus, teachers may not only attempt to enhance the popularity of their students, but also provide opportunities for friendship formation or peer group inclusion. Friendships can not only promote socio-emotional and academic adjustment, but also lead to higher acceptance of diversity in the classroom. As highlighted in chapter 2, 3 and 4, cross-group friendships between students with and without SEN and students with different ethnicities can result in more positive attitudes towards including students with SEN or towards including immigrant students. Thus, a central implication of this dissertation is the promotion of cross-group friendships. However, students perceive exclusion from friendship dyads as legitimate, because it reflects a decision that is related to personal autonomy (Killen, Lee-Kim, McGlothlin, & Stangor, 2002; Killen & Rutland, 2011). Thus, an important conclusion for inclusive classrooms is to create environments that foster voluntary and positive interactions

between students who are different from each other. For example, teachers can specifically plan group activities that require achieving a common goal, as interactions between students who are different from each other are more positive if students work towards a common target (Allport, 1954; Guerra et al., 2010; Johnson, 2003; Miller, Brewer, & Edwards, 1985). While working together, it is important that students focus on personal characteristics of each other instead of focusing on specific competencies required to solve the task (Miller, 2002; Miller et al., 1985). In this way, the possibilities to get to know each other in a naturalistic context are maximized. Cooperative learning arrangements have been shown to result in more interactions between children with and without SEN compared to competitive learning arrangements (Johnson & Johnson, 1982). Furthermore, as friendships mostly form based on shared interests (Killen & Rutland, 2011; Rubin et al., 2006), teachers can highlight shared interests and plan specific group activities for leisure activities within the daily school routines (Cullinan, Sabornie, & Crossland, 1992).

4. Providing Opportunities for Indirect Contact Experiences: Story Telling

If positive interactions among students are difficult to establish, teachers can also facilitate indirect contact between students from different social groups. Previous studies have shown that students who listened to a story about a friendship between a student with and without disability were more positive towards interacting with students having SEN (Cameron & Rutland, 2006). Similarly, students who listened to a story about a cross-group friendship with a refugee student were more willing to interact with refugee students ((Cameron, Rutland, Brown, & Douch, 2006). A central explanation for these positive effects is that indirect contacts reduce students' anxiety about interacting with an out-group member, as they are in the perspective of an observer (Turner, Hewstone, Voci, & Vonofakou, 2008; Wright, Aron, Mclaughlin-Volpe, & Ropp, 1997). Thus, if a teacher is informed that a new student with SEN or with a different ethnic background will arrive, they may first consider such indirect contact interventions. Furthermore, as chapter 3 and 4 indicate, sympathy and trust play a key role in promoting positive intergroup attitudes; thus, theses stories about cross-group friendships could contain special components that portray the life situation of the out-group member, discuss about the out-group members' feelings, and describe this individual as trustworthy.

5. Promoting Social Skills Among Students

Certain interventions to enhance the social standing of children with SEN focus on ameliorating the social skills of these students. These interventions are based on the assumption that students with SEN have lower social competencies than their classmates.

However, this cannot be generalized to all students with SEN, as learning needs do not directly imply social skills deficits. Nevertheless, making and keeping friends requires different socio-emotional and social-cognitive skills, such as skills in perspective-taking, skills in social information processing, skills in recognizing others' emotional states, and skills in problem solving (Rubin et al., 2006). As these skills are helpful for all the children in the classroom, teachers may specifically promote them in their classroom. Moreover, if children have specific problems in their socio-emotional development, such trainings may be beneficial for their friendship development if specifically targeted to the needs of the students (Garrote & Dessemontet, 2015). However, as social interactions between children with and without SEN require both parties, social skills trainings that only focus on students with SEN have been shown to not be very effective in enhancing social participation (Forness & Kavale, 1996; Kavale & Mostert, 2004).

6. Applying Support-Based Interventions

Research scholars distinguish between skills-based interventions (i.e., enhancing social competencies of students with SEN) and support-based interventions Carter and Hughes (2005). Support based interventions focus on the social environment to promote positive interactions between peers. For example, teaching typically developing peers how to interact with SEN peers can be helpful for the formation of friendships, as students with SEN may be insecure about initiating and maintaining friendships (Garrote & Dessemontet, 2015). Such interventions can increase the social participation of children with SEN (Goldstein, English, Shafer, & Kaczmarek, 1997). An additional explanation may be that knowing how to interact with SEN students may decrease intergroup anxiety. Chapter 4 showed that intergroup anxiety was negatively related to intergroup trust, intergroup sympathy, and intergroup attitudes at the beginning of the school year; thus, reducing anxiety may not only help the formation of the friendship, but also enhance the quality of the friendship, leading to higher trust and sympathy. In addition, specific interventions may promote sympathy and trust in children without SEN, which are key components in the development of positive intergroup attitudes. For example, interventions such as volunteering to proactively support in enhancing the social participation of students with SEN, and collaboratively solve social problems of children with SEN in regular meetings (together with the child with SEN) may promote trust and sympathy. Thus, not surprisingly, such interventions are likely to enhance the social acceptance of children with SEN (Frederickson & Turner, 2003).

7. Promoting Socio-Moral Skills Among Students

Furthermore, as adolescents' socio-moral competencies play an important role for their intergroup relations and their development of positive intergroup attitudes, teachers can specifically try to promote their students' socio-moral development. Thereby, moral education needs to be part of the regular curriculum and not an ad-on package (Nucci & Turiel, 2009). The interventions described above aim at promoting sympathy, trust and social skills, such as cooperative behavior among students, and illustrate how socio-moral competencies can be promoted as part of the regular curriculum. Additional considerations of how teachers can promote socio-moral skills are discussed in more detail in section 12.2.4, as moral education is closely interlinked with teacher behavior.

Conclusion

To summarize, enhancing the social participation in inclusive classrooms requires a multilevel and multi-component approach, including children with SEN, their peers without SEN, and the teacher, and target social participation at the individual, group, and classroom level. The practical implications of this dissertation are important for how teachers design their classrooms. This points to the important role of teachers for students' social participation in inclusive classrooms and for their development of inclusive attitudes. How teacher behavior affects children's socio-moral competencies and peer group inclusivity is outlined in the next section.

12.2 The Role of Teacher Behavior for Children's Socio-Moral Competencies and Peer Group Inclusivity

The third main research goal of this dissertation was to better understand how the classroom context shapes students' social experiences. Therefore, this dissertation investigated the role of two different aspects of teacher behavior: How strongly teachers emphasize competitive classroom norms and the quality of student-teacher interactions.

12.2.1 Summary and Integration of the Findings

The summary and integration of the findings are outlined and discussed with regard to the two aspects of teacher behavior that were investigated in this dissertation.

The Role of Competitive Classroom Norms for Early Adolescents' Socio-Moral Competencies

Chapter 5 of this dissertation examined how classroom norms influence students' socio-moral competencies and their exclusionary behavior. Thereby, the research specifically focused on competitive classroom norms, as previous research shows that early adolescents

are more likely to exclude an individual with SEN, if his or her inclusion conflicts with optimal group functioning (Gasser, Chilver-Stainer, Buholzer, & Perrig-Chiello, 2012; Gasser et al., 2014). Moreover, the findings from chapter 2 suggest that early adolescents in inclusive classrooms often balance conflicting needs of being fair versus being in a well functioning group, and that this consideration (as reflected in their emotions about social exclusion) predicts their inclusive intergroup attitudes. Thus, chapter 5 extends chapter 2 by investigating how the classroom context influences students' socio-moral experiences in inclusive classrooms. The three main findings of chapter 5 are: First, hypothetical classmates with low achievement are more likely to be excluded in academic contexts than in social contexts over time (as students move from the fifth to the sixth grade). Second, early adolescents with competitive attitudes are more likely to exclude children with low achievement than adolescents with less competitive attitudes. Third, above and beyond the effect of individual competitive attitudes, competitive classroom norms influence how students decide and reason about social exclusion of children with low achievement: Early adolescents in classrooms with higher competitive norms are more likely to exclude low achieving children in an academic context and more likely to justify this exclusion with reasons for optimal group functioning than children in classrooms with less competitive norms. Consequently, competitive classroom environments foster adolescents' exclusionary behavior and go along with higher preference for considerations of group functioning. These findings illustrate that classrooms in which teachers endorse competitive norms may pose a special risk for the social exclusion of students with SEN. In other words, if students are expected to perform, they may favor well-functioning groups over being fair, which may result in higher rates of social exclusion of students with SEN. This finding is in line with previous research on children's intergroup relations showing that competitive intergroup contexts can enhance negative out-group attitudes (McGuire, Rutland, & Nesdale, 2015; Nesdale et al., 2008; Sherif, 1966). With regard to the findings of chapter 2, this finding thus suggests that early adolescents may be more likely to feel positively about the exclusion of children with SEN if they attend classrooms with highly competitive norms. In addition, such classrooms may not only promote lower socio-moral competencies but also have lower numbers of cross-group friendships. Pellegrini and Blatchford (2000) argue that competitive classroom norms (e.g., classrooms that are structured according to ability level) may facilitate the formation of friendships based on similar ability, whereas cooperative classrooms promote the formation of friendships based on shared interests. In addition, as competitive interactions negatively influence how intergroup contact is experienced (Allport, 1954; Guerra et al., 2010; Miller et

al., 1985), peer interactions between children with and without SEN may be experienced negatively and children may be more ready to exclude classmates that do not conform to the norm of high achievement.

The Role of Emotionally Supportive Teacher-Student Interactions for Students' Socio-Emotional Adjustment

How teachers structure the classroom environment may not only predict children's socio-moral competencies, but also their socio-emotional and academic adjustment (e.g., Luckner & Pianta, 2011). Studying children's socio-emotional and academic adjustment is highly significant, as positive developmental trajectories in these two areas represent two main goals of education. As discussed previously, relationships between children are highly important as they predict their adjustment (e.g., Rubin et al., 2006). In addition to relationships with peers, students also form relationships with their teachers. The quality of teacher-student relationships has significant implications for children's socio-emotional development and academic achievement, as they are positively related to children's learning engagement and their social and behavioral competences (Pianta, 1999). To investigate how early adolescents in inclusive classrooms perceive their teacher, chapter 6 focused on the quality of student-teacher interactions in the classroom, as the quality of these interactions in a classroom contains important information about the classroom climate (Hughes, Zhang, & Hill, 2006). The findings from chapter 6 demonstrate that students' perception of the relationship quality with their teacher decreased from the fifth to the sixth grade; however, this decrease was not found in classrooms with a highly supportive emotional climate. This suggests that the level of emotional support that teachers provide to their students can have a protective role for the decline in perceived relationship quality. How caring and just students perceive their teachers to be has strong implications for their social-emotional and academic adaption (e.g., Peter, Dalbert, Kloeckner, & Radant, 2013; Wentzel, Battle, Russell, & Looney, 2010). Accordingly, the findings of chapter 6 suggest that emotionally supportive teachers may be critical for early adolescents' school adjustment. This finding is also in line with previous research showing that high emotional support from teachers functioned as a buffer against adolescents' decline in school compliance and a decline in their identification with school (Wang & Eccles, 2012). A possible explanation for this finding is that emotionally supportive teachers pay attention to students' need for autonomy (Wentzel, 1998). If students are given opportunities to experience personal autonomy and participate in decisions about classroom issues (e.g., classroom rules), they also experience a higher sense of the classroom as a community. If children feel accepted and valued, they rate their teachers

as just (Vieno, Perkins, Smith, & Santinello, 2005). These findings may explain why the effects of teachers' emotional support on the perception of teacher justice and care in chapter 6 were unique and remained after controlling for teachers' instructional practices and their classroom organization. Classroom organization negatively related to student's perception of their teacher as just over time. Thus, if teachers highly structure the classroom environment, students may have less autonomy and fewer opportunities to practice socially responsible peer behaviour. Supporting this assumption, Pakarinen et al. (2014) showed that children were less socially competent in classrooms that were highly organized (i.e., with clear routines). Furthermore, classrooms that are highly structured may not allow students to experience autonomy, and thus explain why children decreased in their teacher perceptions as just over time, if the classroom was highly organized (see chapter 6).

Chapter 6 further investigated if emotionally supportive classrooms are particularly influential for how students with SEN perceive their teacher. The findings show that while students perceive their teacher as equally caring as their classmates without SEN, they experience more injustice. However, teachers' emotional support did not have a differential effect on the perceptions of students with and without SEN. Thus, even though students may receive higher support from their teachers, they may still feel treated in a less fair way than their classmates without SEN, even if they visit classrooms with a highly emotionally supportive climate. This finding suggests that students with SEN may be more sensitive with regard to justice issues than their classmates without SEN. As the students with SEN in this study all had severe learning difficulties (i.e., they were not evaluated according to the learning targets of their grade level), they may experience more academic failure than their classmates. In addition, students with SEN may also have more experience with social exclusion, and negative peer and teacher interactions (e.g., Hamre & Pianta, 2005; Rose, Monda-Amaya, & Espelage, 2011). As a consequence, they may be more vigilant regarding cues from their teacher and may perceive teachers' practices towards them as more biased (Spears Brown & Bigler, 2005).

Taken together, if early adolescents are in classrooms with emotionally supportive teachers, they feel more valued, accepted, and treated in a just way by their teacher. With regards to the findings of the other chapters of this dissertation, emotionally supportive classrooms may not only predict students' socio-emotional adjustment, but also foster positive interactions among students (Luckner & Pianta, 2011; Mikami et al., 2012). Thereby, emotionally supportive teacher-student interactions may represent role models for students to treat each other with respect and warmth, regardless of any differences in learning abilities or

ethnic background. Supporting this assumption, previous research showed that high emotional teacher support predicted higher acceptance for diversity among students (Sanders & Downer, 2012).

12.2.2 Theoretical Implications

The findings from chapter 5 and 6 extend previous research in several ways, which are outlined step by step in the following sections.

1. *Investigating Children's and Adolescents' Development of Socio-Moral Competencies Using a Longitudinal Design*

While most previous research on intergroup exclusion relied on cross-sectional data (e.g., Killen & Rutland, 2011), chapter 5 investigated how early adolescents' socio-moral competencies change over time. In order to investigate developmental questions, longitudinal designs are necessary, as development occurs within individuals (Selig & Preacher, 2009). The findings of chapter 5 highlight a developmental trend, that from the fifth to the sixth grade, early adolescents increasingly coordinate the context of exclusion with the type of difficulty of the child that is excluded (e.g. are more likely to exclude a child with low achievement in an academic than in a social context). This developmental difference between students in late childhood and early adolescence was also found in previous cross-sectional studies (Gasser et al., 2014; Killen & Rutland, 2011; Killen & Stangor, 2001; Nucci & Turiel, 2009). This may be due to the increasing significance of peers and peer groups (e.g., Abrams et al., 2003), which further explains why children increasingly justified the exclusion of a low-achieving child with concerns for group functioning (Abrams & Rutland, 2008; Killen & Rutland, 2011). Thus, the findings of chapter 5 support the assumptions of the SRD model that the development of socio-moral competencies is closely interlinked with the development of children's intergroup knowledge and social identification (Rutland et al., 2010), and in particular the growing understanding of how groups work during early adolescence.

2. *Contextual Influences on the Development of Early Adolescents' Socio-Moral Competencies and Their Socio-Emotional Adjustment*

While recent research has acknowledged the role of the classroom context for peer group inclusivity (e.g., Mikami et al., 2010), most of the research on socio-moral development focuses on the individual (e.g., Killen & Rutland, 2011) or on the role of peer group norms (e.g., Abrams et al., 2003; Nesdale, Milliner, Duffy, & Griffiths, 2009). Much less is known about how teacher behavior influences moral development; thus, in order to better understand how teachers contribute to children's moral development, additional

research using a contextual analytical approach to moral development is necessary (e.g., Beem, Brugman, Høst, & Tavecchio, 2004). Chapter 5 and 6 provide insight into how teacher practices influence early adolescents' socio-moral experiences in inclusive classrooms. These studies particularly focused on how teacher behavior shapes students' experiences in a specific social and developmental context: Inclusive classrooms in the upper elementary grades. The upper elementary grades are characterized by high levels of stress (Wettstein, Ramseier, & Marion Scherzinger, in press) because students are about to transfer into secondary school. The secondary school system in Switzerland differentiates between different schooling types with different ability levels that are strongly predictive of a students' future academic and occupational career. Which level a student will attend is decided during the upper elementary grades; thus, students are under a lot of pressure to perform in order to achieve high marks. Recent research indicates that student misbehaviour, teacher aggression, and negative teacher-student relationships increases during the upper elementary grades (Wettstein et al., in press). These increasing levels of school distress may – under certain conditions – also negatively predict early adolescents' inclusive attitudes, as shown in chapter 2 and chapter 5 of this dissertation. Furthermore, students perceive their teacher as less caring over time, as chapter 6 demonstrates. Taken together, the upper elementary grades reflect a developmental context that poses challenges with regard to students' social relationships and students' psychological health (Ball, Lohaus, & Miebach, 2006). Thus, the upper elementary grades in Switzerland not only represent an important developmental context to investigate changes in children's thinking about exclusion of students who do not conform to academic and behavioral norms, but also an ideal context to study how teacher behavior can prevent such negative effects for peer group inclusivity and socio-emotional adjustment. The findings from chapter 5 and 6 show that teachers who strongly endorse academic achievement and competition may increase social exclusion while emotionally supportive teachers may have a protective role for students' adjustment, as perceptions of teacher justice and care are important psychological concepts that are linked to healthy development in children and adolescents (Peter et al., 2013; Wang & Eccles, 2012; Wentzel et al., 2010).

Taken together, the findings of chapter 5 and 6 extend previous theories on children's social and moral development by highlighting the role of a supportive classroom climate for developmental periods that are characterized by high levels of stress, such as early adolescents approaching transition to secondary school.

12.2.3 Limitations and Directions for Future Research

The studies of chapter 5 and chapter 6 have several limitations, which are discussed step by step in the next subsections.

1. Different Group Norms may Conflict

While chapter 5 shows that competitive classroom norms may accentuate social inclusion, there may also be other types of norms that influence children's socio-moral reasoning and exclusion decision. As different social identities may be salient to children at the same time (Phinney, 2008), children may identify with different groups holding different norms. These social group norms may also conflict with each other. A recent study showed that peer norms and schools norms may conflict: If children perceive inclusive school norms (i.e., the teachers view exclusion as unfair), they may show more favorable attitudes towards out-group members; however, if these inclusive school norms conflict with peer group norms about exclusion, children may still show negative attitudes towards individuals who do not belong to their social in-group. Thereby, exclusive peer group norms may still promote negative intergroup attitudes, even if children are held accountable for their intergroup attitudes (McGuire et al., 2015). This finding points to the importance of investigating different norms simultaneously, whereby different levels (e.g., peer group, classroom, school) could be taken into account. Furthermore, in order to get a more complete picture of how competitive classroom norms influence the formation of peer relationships in inclusive classrooms, future research should investigate how the perception of different classroom norms (e.g., inclusive, competitive) relate to the formation of children's and adolescents' peer relationships with regard to the three proposed aspects of social relationships.

2. The Role of Emotionally Supportive Teacher-Student Interactions for Students with SEN: Considering Multiple Risk Factors

Chapter 6 investigated if emotionally supportive student-teacher interactions were particularly beneficial for students with SEN. Contrary to the expected effect, emotional support provided by teachers, did not have a differential influence on students with SEN than on their classmates without SEN. However, in contrast to the studies that did find a protective role of teacher's emotional support for children at risk, chapter 6 assumed that higher learning needs would pose a risk for students' adjustment. However, as outlined in this dissertation, socio-emotional adjustment also depends on children's relationships with peers. Furthermore, higher learning needs may only be one of many risk factors for children's socio-emotional adjustment. For example, a child with a learning disability that experiences high emotional

support by his or her family or by peers does not have the same risk for emotional complications as a child with multiple functional problems (e.g., learning disability and behavioral problems) who does not receive support by his or her family (Morrison & Cosden, 1997). Thus, future research could benefit from studying the potential protective role of the school environment for students with SEN by taking multiple risk and resilience factors into account (e.g., Gutman, Sameroff, & Cole, 2003).

3. An Integrative Perspective of the Role of Peer Relationships and Student-Teacher Relationships for Emotional and Academic Adjustment

While chapter 6 showed that emotionally supportive classrooms serve a protective role for decreases in perceived teacher care and justice, the study did not directly assess students' social and academic adaption. Furthermore, as outlined above, students' peer relationships are significant for their adjustment. Thus, future research would not only shed more light on how teacher-student relationships and peer relationships interrelate in a classroom (e.g., Mikami et al., 2012), but also study the differential effects of teacher-student relationships and peer relationships on the socio-emotional and academic adjustment in inclusive classrooms within longitudinal designs (e.g., Wang & Eccles, 2012).

12.2.4 Practical Implications for Inclusive Education

1. Including Children with Difficulties that are Seen as Highly Negative: Promoting Understanding for Each Others' Special Needs

In addition to children with low academic achievement, which represent the vast majority of students with SEN, chapter 5 investigated early adolescents' reasoning about the exclusion of hypothetical classmates with hyperactive behavior. The findings from chapter 5 illustrate that early adolescents showed a high probability to exclude hypothetical classmates with hyperactive behavior. Hyperactive behavior is seen has highly negative by peers, as it is disruptive for social relationships (Harnum, Duffy, & Ferguson, 2007; Hoza, 2007). Early adolescents attribute negative characteristics (e.g., crazy, careless) to hyperactive children (Law, Sinclair, & Fraser, 2007) and view hyperactive behavior as intentional and controllable (Smith & Williams, 2001). In chapter 5, the exclusion of hyperactive children was high, independent of the classroom norms, suggesting that the exclusion of children with highly negative evaluated traits may depend less on social-contextual factors; thus, the exclusion of children with certain behaviors who are seen in a highly negative light may be more difficult to target. Indirect contact interventions may serve to reduce negative attitudes towards hyperactive children, as students do not directly interact with hyperactive peers and thus, may

be less anxious about potential negative experiences when interacting with hyperactive children. In order to highlight the social challenges of hyperactive students, stories about friendships with hyperactive children may include information about the specific difficulties of these children, whereby a key component may be to understand that hyperactive behavior is not intentional. A recent study suggests that children are more likely to exclude hyperactive students than students who suffer from depression, because they think that hyperactivity is intentional while they understand depression as less under control of the individual (O'Driscoll, Heary, Hennessy, & McKeague, 2015).

Thus, understanding that children with hyperactive behavior do not intentionally behave in this way, and thus informing students about the specific needs of peers who display hyperactive behavior, may be a first step in achieving higher peer group inclusivity. Furthermore, the specific interventions of how to promote the inclusion of children with SEN may also be successful in enhancing the social participation of children with hyperactive behavior (see section 12.1.4).

2. *Teaching Practices: Cooperative Learning Environments and Providing Emotional Support*

The findings of chapter 5 and 6 imply that cooperative classroom structures and emotionally supportive teacher-student interactions may promote socio-moral competencies and positively predict socio-emotional adaption. Section 12.1.4 addresses how cooperative learning structures may enhance the formation of cross-group friendships. Furthermore, cooperative learning structures may also promote intergroup helping and intergroup sympathy in inclusive classrooms (Johnson & Johnson, 1982) and increase the social acceptance of children with SEN (Garrote & Dessemontet, 2015; Murphy, Grey, & Honan, 2005). By creating cooperative learning environments and discussing common goals, teachers may create a common in-group identity in their classroom, which is known to facilitate acceptance between groups (Gaertner et al., 1990). If social participation is the goal, classrooms may discuss common social goals and reflect on how everyone contributes to this goal during regular meetings (Garrote & Dessemontet, 2015). By providing opportunities to commonly discuss and reflect on social goals, teachers show emotionally supportive behavior because they provide opportunities for autonomy, and encourage students' ideas. Furthermore, emotionally supportive teachers aim to communicate in a warm and respectful way with their students and are aware of, and responsive to, students' social and emotional needs (Pianta, Hamre, & Mintz, 2012). Chapter 6 shows that these interactions are of particular importance in phases that are characterized by high academic stress. This enhanced stress is due to the

school system that is based on selection decisions. However, teachers do not have the power to change the educational system, but they may still protect students from negative experiences by providing high levels of emotional support. A central component may be the experience of personal autonomy, which is a central experience in students' development of socio-moral competencies (Althof, 2015; Vieno et al., 2005). Therefore, emotionally supportive teachers likely also promote socio-moral competencies.

3. Promoting Socio-Moral Competencies in the Classroom

Effective intervention strategies to target social exclusion are those that challenge prejudice and stereotypic expectations and foster socio-moral competencies (Rutland & Killen, 2015). Thus, if students acquire socio-moral competencies, they may challenge prejudice and advocate norms of fairness and equality. Teachers can actively promote socio-moral competencies by providing opportunities for role-taking, problem-solving, and allow students to take on responsibilities, such as democratic participation (Gasser & Althof, in press; Nunner‐Winkler, 2007). Participation is thought to increase students' discursive competencies, their sense of school belonging, and their experience of the school as fair and caring (Kohlberg, 1985; Oser, Althof, & Higgins‐D'Alessandro, 2008). Furthermore, teachers may promote students' socio-moral competencies by discussing various social issues from different perspectives, whereby these discussions need to take into account children's developmental stage. For example, situations of social exclusion may be discussed and teachers may actively promote a differential understanding of the situation. The goal of these discussions is for children to learn to differentiate between the underlying moral, conventional, and personal issues that lead to social exclusion, and understand the complexity and ambiguity of these situations (Nucci & Turiel, 2009). Teachers should discuss various situations and systematically relate these discussions to the everyday experiences of their students. This makes apparent that socio-moral competencies can be promoted within the regular curriculum and do not need to be treated as a special add-on or a specific moral education lesson (Nucci, 2008). The findings of chapter 5 show that children may reason differently about social exclusion if it is evaluated from the perspective of peers than from the perspective of the self. Thus, teachers should take this discrepancy into consideration when discussing peer group conflicts with their students. If teachers influence children to critically reflect on their decisions and motivation for exclusion, they may also create a climate that does not tolerate social exclusion. For example Verkuyten (2008) showed that teachers who discussed examples of ethnic exclusion and issues of fairness towards all cultures established an inclusive classroom norm that discouraged social exclusion. Furthermore, Verkuyten and

Thijs (2002) showed that children reported less ethnic-based exclusion if they could trust the teacher with information about unfair behavior and were confident that the teacher would take action.

These findings also point to the role of the teacher in promoting students' socio-moral development as role models for fairness, care, respect, and equality (Gasser & Althof, in press). Thereby, perceived teacher care and justice not only reflect important dimensions of how students' perceive the relationship quality with their teacher, but also represent two central aspects of teaching quality and moral teacher behavior (Nucci, 2008; Oser, 1994). This particular role of teachers in facilitating moral development has several implications for teacher education.

4. Preparing Teachers for Inclusive Classrooms: The Role of Teacher Education

Moral issues should not only be included into the educational curriculum of regular schools, but also into the curriculum of teacher education (Gasser & Althof, in press). The idea is that, if socio-moral issues are included into the regular curriculum of teacher education, teachers may find it easier to systematically reflect upon possibilities to integrate discussions about socio-moral issues into the regular curriculum. Specifically, pre-service teachers may analyze the content of their lessons with regard to opportunities for discussions on socio-moral topics (Nucci, 2008). However, even if pre-service teachers reflect upon moral issues during their studies, this may not guarantee that they link this knowledge to their teaching practice (e.g., Oser, 1994). Thus, specific training components are required to help pre-service students shape teaching practices and teacher-student interactions in a way that facilitates their students' socio-moral development (Gasser & Althof, in press). Chapter 6 of this dissertation shows that emotionally supportive teacher behavior is one such component of teaching behavior. Thus, if the CLASS-framework is not only used for studying teacher-student interactions but also to promote specific skills in pre-service teachers, they may increase their sensitivity for students with diverse learning needs (Mikami, Gregory, Allen, Pianta, & Lun, 2011). Besides emotional support, teacher behavior such as providing opportunities for group discussions, and for autonomous and analytical thinking, is expected to promote students' socio-moral development (Veugelers & Vedder, 2003).

13 Conclusion

The main objective of this dissertation was to gain insight into how inclusive school environments should ideally be designed in order to enhance the social participation of all students. Using a multi-level approach and a multi-method and multi-informant framework,

the findings of the dissertation illustrate how social participation may be promoted at different levels. At the classroom level, emotionally supportive peer interactions and cooperative classroom structures can foster the development of children's socio-moral competencies and positive emotional adjustment. At the level of friendship dyads, the dissertation shows that cross-group friendships play a key role in the development of individuals' inclusive intergroup attitudes. Extending previous models on the development of positive intergroup attitudes, the findings of this dissertation highlight that the relationship between cross-group friendship and the development of inclusive intergroup attitudes is closely interlinked with the development of socio-moral competencies. Thus, when carefully approached, diverse classrooms can promote tolerance and equality among children. Inclusive classrooms inherit a strong potential to target prejudicial attitudes at an early stage in development. However, this dissertation shows that positive outcomes of intergroup contact, and specifically cross-group friendship, depend on students' socio-moral development. Thus, developmental processes shape how cross-group friendships are experienced. With a focus on early adolescents, the dissertation highlights the everyday experiences of conflicting considerations of being fair and inclusive versus being in a well-achieving group in inclusive classrooms. Increasing levels of academic stress may even enhance such conflicting experiences. Thereby, the findings of this dissertation underscore the importance of emotionally supportive classroom environments for peer group inclusivity, which may in turn provide the basis for positive peer interactions and the formation of cross-group friendships.

Taken together, this dissertation emphasizes that achieving social participation goes much beyond than simply putting children who are different from each other (i.e., in terms of ability levels, socio-emotional development, or ethnicity) into the same classroom. Peer group inclusivity is a result of different developmental processes, which are closely interlinked with each other: The formation of peer relationships, the formation of socio-moral competencies, and the formation of intergroup attitudes, whereby these developments strongly depend on the social context. In order to promote social participation, teachers need to be aware of how their behavior influences these developmental processes. Thereby, teacher education has a significant task of preparing teachers for their central role in promoting equality and inclusion. If teachers and professionals working in education understand inclusion from a multi-level perspective, they may promote socially responsible behavior among children and adolescents, and promote students' diversity values, as highlighted in the following statements of early adolescent study participants:

Interviewer: “What kind of differences do you perceive in your school class?”

Student 3: “Some children are nice, some children are unfair and mean.”

Interviewer: “Are there any differences that bother you?”

Student 3: “No, there aren’t any because everyone is the way he or she is”

Interviewer: “Petra is a child who has problems in school. She needs a lot of time and support to solve tasks in school. Sarah is doing well in school. Who would you choose to work with to solve a difficult math task and why?”

Student 4: “I would once include Petra and next time Sarah in my group because it is possible to work well together with both, just in a different way.”

References

Aboud, F. E., Mendelson, M. J., & Purdy, K. T. (2003). Cross-race peer relations and friendship quality. *International Journal of Behavioral Development, 27*, 165–173. doi: 10.1080/01650250244000164

Abrams, D., & Killen, M. (2014). Social exclusion of children: Developmental origins of prejudice. *Journal of Social Issues, 70*, 1–11. doi: 10.1111/josi.12043

Abrams, D., & Rutland, A. (2008). The development of subjective group dynamics. In S. R. Levy & M. Killen (Eds.), *Intergroup relations and attitudes in childhood through adulthood* (pp. 47–65). Oxford, UK: Oxford University Press.

Abrams, D., Rutland, A., & Cameron, L. (2003). The development of subjective group dynamics: Children's judgments of normative and deviant in-group and out-group individuals. *Child Development, 74*, 1840–1856. doi: 10.1046/j.1467-8624.2003.00641.x

Abrams, D., Rutland, A., Pelletier, J., & Ferrell, J. M. (2009). Children's group nous: Understanding and applying peer exclusion within and between groups. *Child Development, 80*, 224–243. doi: 10.1111/j.1467-8624.2008.01256.x

Ainscow, M. (2009). Developing inclusive education systems: What are the levers for change? In P. Hick & G. Thomas (Eds.), *Inclusion in diversity and education: Vol. 2. Developing inclusive schools and school systems* (pp. 1–13). London: SAGE Publications.

Allport, G. W. (1954). *The nature of prejudice.* Reading, MA: Addison-Wesley Publishing Company.

Althof, W. (2015). Just community sources and transformations: A conceptual archaeology of Kohlberg's approach to moral and democratic education. In B. Zizek, D. Garz, & E. Nowak (Eds.), *Kohlberg revisited: Vol. 9. Moral development and citizenship education* (pp. 51–89). Rotterdam: Sense Publishers.

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of Other in the Self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology, 63*, 596–612. doi: 10.1037/0022-3514.63.4.596

Arsenio, W. F., Gold, J., & Adams, E. (2006). Children' s conceptions and displays of moral emotions. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development* (pp. 581–609). Mahwah, NJ: Erlbaum.

Avramidis, E. (2013). Self-concept, social position and social participation of pupils with SEN in mainstream primary schools. *Research Papers in Education, 28*, 421–442. doi: 10.1080/02671522.2012.673006

Ball, J., Lohaus, A., & Miebach, C. (2006). Psychische Anpassung und schulische Leistungen beim Wechsel von der Grundschule zur weiterführenden Schule [Psychological adjustment and school achievement during transition from elementary to secondary school] *Zeitschrift für Entwicklungspsychologie und Pädagogische Psychologie, 38*, 101–109.

Bates, H., McCafferty, A., Quayle, E., & McKenzie, K. (2015). Review: Typically-developing students' views and experiences of inclusive education. *Disability and Rehabilitation, 37*, 1929–1939. doi: 10.3109/09638288.2014.993433

Beem, A. L., Brugman, D., Høst, K., & Tavecchio, L. W. (2004). Students' perception of school moral atmosphere: From moral culture to social competence. A generalizability study. *European Journal of Developmental Psychology, 1*, 171–192. doi: 10.1080/17405620444000076

Bundesamt für Statistik. (2015). *Lernende nach Bildungsstufe und Bildungstyp* [Students according to level and type of education]. Retrieved from http://www.bfs.admin.ch/bfs/portal/de/index/themen/15/02/data/blank/02.html

Bigler, R. S., & Liben, L. S. (2007). Developmental intergroup theory: Explaining and reducing children's social stereotyping and prejudice. *Current Directions in Psychological Science, 16*, 162–166. doi: 10.1111/j.1467-8721.2007.00496.x

Bossaert, G., Colpin, H., Pijl, S. J., & Petry, K. (2013). Truly included? A literature study focusing on the social dimension of inclusion in education. *International Journal of Inclusive Education, 17*, 60–79. doi: 10.1080/13603116.2011.580464

Bossaert, G., de Boer, A. A., Frostad, P., Pijl, S. J., & Petry, K. (2015). Social participation of students with special educational needs in different educational systems. *Irish Educational Studies, 34*, 43–54. doi: 10.1080/03323315.2015.1010703

Brendgen, M., Bowen, F., Rondeau, N., & Vitaro, F. (2001). Effects of friends' characteristics on children's social cognitions. *Social Development, 8*, 41–51. doi: 10.1111/1467-9507.00079

Brenick, A., & Killen, M. (2014). Moral judgments about Jewish-Arab intergroup exclusion: The role of cultural identity and contact. *Developmental Psychology, 50*, 86–99. doi: 10.1037/a0034702

Byrne, B. (1971). *The attraction paradigm.* New York, NY: Academic.

Cameron, L., & Rutland, A. (2006). Extended contact through story reading in school: Reducing children's prejudice toward the disabled. *Journal of Social Issues, 62*, 469–488. do: 10.1111/j.1540-4560.2006.00469.x

Cameron, L., Rutland, A., Brown, R. J., & Douch, R. (2006). Changing children's Intergroup attitudes toward refugees: Testing different models of extended contact. *Child Development, 77*, 1208–1219. doi: 10.1111/j.1467-8624.2006.00929.x

Carter, E. W., & Hughes, C. (2005). Increasing social interaction among adolescents with intellectual disabilities and their general education peers: Effective interventions. *Research and Practice for Persons with Severe Disabilities (RPSD), 30*, 179–193. doi: 10.2511/rpsd.30.4.179

Chang, L. (2004). The role of classroom norms in contextualizing the relations of children's social behaviors to peer acceptance. *Developmental Psychology, 40*, 691–702. doi: 10.1037/0012-1649.40.5.691

Chang, L., Liu, H., Wen, Z., Fung, K. Y., Wang, Y., & Xu, Y. (2004). Mediating teacher liking and moderating authoritative teaching on Chinese adolescents' perceptions of antisocial and prosocial behaviors. *Journal of Educational Psychology, 96*, 369–380. doi: 10.1037/0022-0663.96.2.369

Crystal, D. S., Killen, M., & Ruck, M. (2008). It is who you know that counts: Intergroup contact and judgments about race-based exclusion. *British Journal of Developmental Psychology, 26*, 51–70. doi: 10.1348/026151007X198910

Cullinan, D., Sabornie, E. J., & Crossland, C. L. (1992). Social mainstreaming of mildly handicapped students. *The Elementary School Journal, 92*, 339–351. doi: 10.1086/461696

Davies, K., Tropp, L. R., Aron, A., Pettigrew, T. F., & Wright, S. C. (2011). Cross-group friendships and intergroup attitudes: A meta-analytic review. *Personality and Social Psychology Review, 15*, 332–351.doi: 10.1177/1088868311411103

Diamond, K. E., & Hestenes, L. L. (1996). Preschool children's conceptions of disabilities: The salience of disability in children's ideas about others. *Topics in Early Childhood Special Education, 16*, 458–475. doi: 10.1177/027112149601600406

Dijkstra, J. K., & Gest, S. D. (2015). Peer norm salience for academic achievement, prosocial behavior, and bullying: Implications for adolescent school experiences. *Journal of Early Adolescence, 35*, 79–96. doi: 10.1177/0272431614524303

Dunn, D. S., & Burcaw, S. (2013). Disability identity: Exploring narrative accounts of disability. *Rehabilitation Psychology, 58*, 148–157. doi: 10.1037/a0031691

Eisenberg, N., Eggum, N. D., & Di Giunta, L. (2010). Empathy-related responding: Associations with prosocial behavior, aggression, and intergroup relations. *Social Issues and Policy Review, 4*, 143–180. doi: 10.1111/j.1751-2409.2010.01020.x

Feddes, A. R., Noack, P., & Rutland, A. (2009). Direct and extended friendship effects on minority and majority children's interethnic attitudes: A longitudinal study. *Child Development, 80*, 377–390. doi: 10.1111/j.1467-8624.2009.01266.x

Fiske, S. T., & Taylor, S. E. (2013). *Social Cognition. From Brains to Culture* (2nd ed.). London, UK: Sage Publications Ltd.

Forness, S. R., & Kavale, K. A. (1996). Treating social skill deficits in children with learning disabilities: A meta-analysis of the research. *Learning Disability Quarterly, 19*, 2-13. doi: 10.2307/1511048

Frederickson, N., & Turner, J. (2003). Utilizing the classroom peer group to address children's social needs: An evaluation of the circle of friends intervention approach. *The Journal of Special Education, 36*, 234–245. doi: 10.1177/002246690303600404

Frostad, P., Mjaavatn, P. E., & Pijl, S. J. (2011). The stability of social relations among adolescents with special educational needs (SEN) in regular schools in Norway. *London Review of Education, 9*, 83–94. doi: 10.1080/14748460.2011.550438

Furman, W. (1996). The measurement of friendship perceptions: Conceptual and methodological issues. In W. M. Bukowski, A. F. Newcomb, & W. W. Hartup (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 41–65). New York, NY: Cambridge University Press.

Furman, W., & Buhrmester, D. (1985). Children's perceptions of the personal relationships in their social networks. *Developmental Psychology, 21*, 1016–1024. doi: 10.1037/0012-1649.21.6.1016

Gaertner, S. L., Mann, J. A., Dovidio, J. F., Murrell, A. J., & Pomare, M. (1990). How does cooperation reduce intergroup bias? *Journal of Personality and Social Psychology, 59*, 692–704. doi: 10.1037/0022-3514.59.4.692

Garrote, A. (2016). Soziale Teilhabe von Kindern in inklusiven Klassen [Social participation of children in inclusive classrooms]. *Empirische Pädagogik, 30*, 67–80.

Garrote, A., & Dessemontet, R. S. (2015). Social participation in inclusive classrooms: Empirical and theoretical foundations of an intervention program. *Journal of Cognitive Education and Psychology, 14*, 375–388. doi: 10.1891/1945-8959.14.3.375

Gasser, L., & Althof, W. (in press). Learning of moral and ethical issues in teacher education based on cognitive theories of moral reasoning and behavior (developmental views). In D. J. Candidin & J. Husu (Eds.), *International handbook of research in teacher education.* Thousand Oaks, CA: Sage Publications.

Gasser, L., Chilver-Stainer, J., Buholzer, A., & Perrig-Chiello, P. (2012). Soziales und moralisches Denken von Kindern über den Ein- und Ausschluss behinderter Kinder [Children's social and moral reasoning about inclusion and exclusion of disabled children]. *Zeitschrift für Pädagogische Psychologie, 26*, 031–042. doi: 10.1024/1010-0652/a000058

Gasser, L., Chilver-Stainer, J., & Tempelmann, S. (2013). Das Verständnis von geistiger und körperlicher Behinderung: Zusammenhänge mit Alter, Kontakt und Einstellungen [Understanding of mental and physical disabilities: Relations with age, contact, and attitudes]. *Empirische Sonderpädagogik, 4*, 361–373.

Gasser, L., & Malti, T. (2012). Children's and their friends' moral reasoning: Relations with aggressive behavior. *International Journal of Behavioral Development, 36*, 358–366. doi: 10.1177/0165025412448353

Gasser, L., Malti, T., & Buholzer, A. (2014). Swiss children's moral and psychological judgments about inclusion and exclusion of children with disabilities. *Child Development, 85*, 532–548. doi: 10.1111/cdev.12124

Gest, S. D., Graham-Bermann, S. A, & Hartup, W. W. (2001). Peer experience: Common and unique features of number of friendships, social network centrality, and sociometric status. *Social Development, 10*, 23–40. doi: 10.1111/1467-9507.00146

Gifford-Smith, M. E., & Brownell, C. A. (2003). Childhood peer relationships: Social acceptance, friendships, and peer networks. *Journal of School Psychology, 41*, 235–284. doi: 0.1016/S0022-4405(03)00048-7

Goldstein, H., English, K., Shafer, K., & Kaczmarek, L. (1997). Interaction among preschoolers with and without disabilities. *Journal of Speech Language and Hearing Research, 40*, 33-48. doi: 10.1044/jslhr.4001.33

Graham, S., Munniksma, A., & Juvonen, J. (2014). Psychosocial benefits of cross-ethnic friendships in urban middle schools. *Child Development, 85*, 469–483. doi: 10.1111/cdev.12159

Grütter, J., & Meyer, B. (2014). Intergroup friendship and children's intentions for social exclusion in integrative classrooms: The moderating role of teachers' diversity beliefs. *Journal of Applied Social Psychology, 44*, 481–494. doi: 10.1111/jasp.12240

Guerra, R., Rebelo, M., Monteiro, M. B., Riek, B. M., Mania, E. W., Gaertner, S. L., & Dovidio, J. F. (2010). How should intergroup contact be structured to reduce bias among majority and minority group children? *Group Processes & Intergroup Relations, 13*, 445–460. doi: 10.1177/1368430209355651

Gummerum, M., & Keller, M. (2008). Affection, virtue, pleasure, and profit: Developing an understanding of friendship closeness and intimacy in western and Asian societies. *International Journal of Behavioral Development, 32*, 218–231. doi: 10.1177/0165025408089271

Gutman, L. M., Sameroff, A. J., & Cole, R. (2003). Academic growth curve trajectories from 1st grade to 12th grade: Effects of multiple social risk factors and preschool child factors. *Developmental Psychology, 39*, 777–790. doi: 10.1037/0012-1649.39.4.777

Hamre, B. K., & Pianta, R. C. (2005). Can instructional and emotional support in the first-grade classroom make a difference for children at risk of school failure? *Child Development, 76*, 949–967. doi: 10.1111/j.1467-8624.2005.00889.x

Harnum, M., Duffy, J., & Ferguson, D. a. (2007). Adults' versus children's perceptions of a child with autism or attention deficit hyperactivity disorder. *Journal of Autism and Developmental Disorders, 37*, 1337–1343. doi: 10.1007/s10803-006-0273-0

Hartup, W. W. (1996). The company they keep: Friendships and their developmental significance. *Child Development, 67*, 1–13. doi: 10.1111/1467-8624.ep9602271141

Hitti, A., Mulvey, K. L., Rutland, A., Abrams, D., & Killen, M. (2014). When is it okay to exclude a member of the ingroup? Children's and adolescents' social reasoning. *Social Development, 23*, 451–469. doi: 10.1111/sode.12047

Hodges, E. V. E., Boivin, M., Vitaro, F., & Bukowski, W. M. (1999). The power of friendship: Protection against an escalating cycle of peer victimization. *Developmental Psychology, 35*, 94–101. doi: 10.1037/0012-1649.35.1.94

Horn, S. S. (2003). Adolescents' reasoning about exclusion from social groups. *Developmental Psychology, 39*, 71–84. doi: 10.1037/0012-1649.39.1.71

Hoza, B. (2007). Peer functioning in children with ADHD why are peer relationships important. *Journal of Pediatric Psychology, 32*, 655–663. doi: 10.1093/jpepsy/jsm024

Huber, C. (2009). Soziale Ausgrenzung in der Integration von Schülern mit sonderpädagogischem Förderbedarf: Zusammenhang von Persönlichkeit, Gruppenheterogenität und sozialer Ausgrenzung [Beyond the Pilotprojekt: Social rejection and school integration: A survey of the interrelationship between personal factors, group-heterogeneity and social rejection of children with special educational needs]. *Empirische Pädagogik, 23*, 170–190.

Huber, C. (2011). Lehrerfeedback und soziale Integration. Sie soziale Referenzierungsprozesse die soziale Integration in der Schule beeinflussen können [Teacher's feedback and social integration: Is there a link between social referencing theory and social integration in school]. *Empirische Sonderpädagogik, 1*, 20–36.

Hughes, J. N., Zhang, D., & Hill, C. R. (2006). Peer assessments of normative and individual teacher-student support predict social acceptance and engagement among low-achieving children. *Journal of School Psychology, 43*, 447–463. doi: 10.1016/j.jsp.2005.10.002

Johnson, D. W. (2003). Social interdependence: Interrelationships among theory, research, and practice. *The American Psychologist, 58*, 934–945. doi: 10.1037/0003-066X.58.11.934

Johnson, R. T., & Johnson, D. W. (1982). Effects of cooperative and competitive learning experiences on interpersonal attraction between handicapped and non-handicapped students. *The Journal of Social Psychology, 116*, 211–219. doi: 10.1080/ 00224545.1982.9922773

Jordan, A., Schwartz, E., & McGhie-Richmond, D. (2009). Preparing teachers for inclusive classrooms. Teaching and Teacher Education, 25, 535–542. doi: 10.1016/j.tate.2009.02.010

Kahn, P. H., & Turiel, E. (1988). Children's conceptions of trust in the context of social expectations. *Merrill-Palmer Quarterly, 34*, 403–419.

Kavale, K. A., & Mostert, M. P. (2004). Social skills interventions for individuals with learning disabilities. *Learning Disability Quarterly, 27*, 31–43. doi: 10.2307/1593630

Killen, M. (2007). Children's social and moral reasoning about exclusion. Current Directions in *Psychological Science, 16*, 32–36. doi: 10.1111/j.1467-8721.2007.00470.x

Killen, M., Elenbaas, L., & Rutland, A. (2016). Balancing the fair treatment of others while preserving group identity and autonomy. *Human Development, 58*, 253–272. doi: 10.1159/000444151

Killen, M., Lee-Kim, J., McGlothlin, H., & Stangor, C. (2002). How children and adolescents evaluate gender and racial exclusion. *Monographs of the Society for Research in Child Development, 67*(4). doi: 10.1111/1540-5834.00220

Killen, M., & Malti, T. (2015). Moral judgments and emotions in contexts of peer exclusion and victimization. *Advances in Child Development and Behavior, 48*, 249–276. doi:10.1016/bs.acdb.2014.11.007

Killen, M., Mulvey, K. L., & Hitti, A. (2013). Social exclusion in childhood: A developmental intergroup perspective. *Child Development, 84*, 772–790. doi: 10.1111/cdev.12012

Killen, M. & Rutland, A. (2011). *Children and social exclusion: Morality, prejudice and group identity*. doi: 10.1002/9781444396317

Killen, M., Rutland, A., Abrams, D., Mulvey, K. L., & Hitti, A. (2013). Development of intra- and intergroup judgments in the context of moral and social-conventional norms. *Child Development, 84*, 1063–1080. doi: 10.1111/cdev.12011

Killen, M., & Stangor, C. (2001). Children's social reasoning about inclusion and exclusion in gender and race peer group contexts. *Child Development, 72*, 174–186. doi: 10.1111/1467-8624.00272

Kiuru, N., Nurmi, J.-E., Aunola, K., & Salmela-Aro, K. (2009). Peer group homogeneity in adolescents' school adjustment varies according to peer group type and gender. *International Journal of Behavioral Development, 33*, 65–76. doi: 10.1177 /0165025408098014

Kohlberg, L. (1985). The just community approach to moral education in theory and practice. In M. W. Berkowitz & F. K. Oser (Eds.), *Moral education: Theory and application* (pp. 219–238). Hillsdale, NJ: Lawrence Erlbaum Associates.

Koster, M., Nakken, H., Pijl, S. J., & van Houten, E. (2009). Being part of the peer group: A literature study focusing on the social dimension of inclusion in education. *International Journal of Inclusive Education, 13*, 117–140. doi: 10.1080/13603110701284680

Koutsouris, G. (2014). Young people's preferences for social interaction in terms of homophily and social inclusion: A critical discussion about respect. *European Journal of Special Needs Education, 29*, 521–535. doi: 10.1080/08856257.2014.933547

Ladd, G. W., Kochenderfer, B. J., & Coleman, C. C. (1997). Classroom peer acceptance, friendship, and victimization: Distinct relational systems that contribute uniquely to children's school adjustment? *Child Development, 68*, 1181-1197. doi: 10.2307/1132300

Law, G. U., Sinclair, S., & Fraser, N. (2007). Children's attitudes and behavioural intentions towards a peer with symptoms of ADHD: Does the addition of a diagnostic label make a difference? *Journal of Child Health Care: For Professionals Working with Children in the Hospital and Community, 11*, 98–111. doi: 10.1177/1367493507076061

Lindsay, G. (2007). Educational psychology and the effectiveness of inclusive education/mainstreaming. *British Journal of Educational Psychology, 77*, 1–24. doi: 10.1348/000709906X156881

Luckner, A. E., & Pianta, R. C. (2011). Teacher–student interactions in fifth grade classrooms: Relations with children's peer behavior. *Journal of Applied Developmental Psychology, 32*, 257–266. doi: 10.1016/j.appdev.2011.02.010

Magiati, I., Dockrell, J. E., & Logotheti, A. (2002). Young children's understanding of disabilities: The influence of development, context, and cognition. *Journal of Applied Developmental Psychology, 23*, 409–430. doi: 10.1016/S0193-3973(02)00126-0

Malcolm, K. T., Jensen-Campbell, L. A., Rex-Lear, M., & Waldrip, A. M. (2006). Divided we fall: Children's friendships and peer victimization. *Journal of Social and Personal Relationships, 23*, 721–740. doi: 10.1177/0265407506068260

Mallett, R. K., Huntsinger, J. R., Sinclair, S., & Swim, J. K. (2008). Seeing through their eyes: When majority group members take collective action on behalf of an outgroup. *Group Processes & Intergroup Relations, 11*, 451–470. doi: 10.1177/1368430208095400

Malti, T., Averdijk, M., Zuffiano, A., Ribeaud, D., Betts, L. R., Rotenberg, K. J., & Eisner, M. P. (2016). Children's trust and the development of prosocial behavior. *International Journal of Behavioral Development, 40*, 262-270. doi: 10.1177/0165025415584628

Malti, T., Gasser, L., & Gutzwiller-Helfenfinger, E. (2010). Children's interpretive understanding, moral judgments, and emotion attributions: Relations to social behaviour. *British Journal of Developmental Psychology, 28*, 275–292. doi: 10.1348/026151009X403838

Malti, T., Keller, M., & Buchmann, M. (2013). Do moral choices make us feel good? The development of adolescents' emotions following moral decision making. *Journal of Research on Adolescence, 23*, 389–397. doi: 10.1111/jora.12005

Malti, T., Keller, M., Gummerum, M., Buchmann, M. (2009). Children' s moral motivation, sympathy, and prosocial behavior. *Child Development, 80*, 442–460. doi: 10.1111/j.1467-8624.2009.01271.x.

Malti, T., Killen, M., & Gasser, L. (2012). Social judgments and emotion attributions about exclusion in Switzerland. *Child Development, 83*, 697–711. doi: 10.1111/j.1467-8624.2011.01705.x

Malti, T., & Krettenauer, T. (2013). The relation of moral emotion attributions to prosocial and antisocial behavior: A meta-analysis. *Child Development, 84*, 397–412. doi: 10.1111/j.1467-8624.2012.01851.x

Mand, J. (2007). Social position of special needs pupils in the classroom: A comparison between German special schools for pupils with learning difficulties and integrated primary school classes. *European Journal of Special Needs Education, 22*, 7–14. doi: 10.1080 /08856250601082182

McAuliffe, M. D., Hubbard, J. A., & Romano, L. J. (2009). The role of teacher cognition and behavior in children's peer relations. *Journal of Abnormal Child Psychology, 37*, 665–677. doi: 10.1007/s10802-009-9305-5

McGuire, L., Rutland, A., & Nesdale, D. (2015). Peer group norms and accountability moderate the effect of school norms on children's intergroup attitudes. *Child Development, 86*, 1290–1297. doi: 10.1111/cdev.12388

McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a feather: Homophily in social networks. *Annual Review of Sociology, 27*, 415–444. doi: 10.1146/annurev.soc.27.1.415

Mikami, A. Y., Gregory, A., Allen, J. P., Pianta, R. C., & Lun, J. (2011). Effects of a teacher professional development intervention on peer relationships in secondary classrooms. *School Psychology Review, 40*, 367–385.

Mikami, A. Y., Griggs, M. S., Reuland, M. M., & Gregory, A. (2012). Teacher practices as predictors of children's classroom social preference. *Journal of School Psychology, 50*, 95–111. doi: 10.1016/j.jsp.2011.08.002

Mikami, A. Y., Lerner, M. D., & Lun, J. (2010). Social context influences on children's rejection by their peers. *Child Development Perspectives, 4*, 123–130. doi: 10.1111/j.1750-8606.2010.00130.x

Miller, N. (2002). Personalization and the promise of contact theory. *Journal of Social Issues, 58*, 387–410. doi: 10.1111/1540-4560.00267

Miller, N., Brewer, M. B., & Edwards, K. (1985). Cooperative interaction in desegregated settings: A laboratory analogue. *Journal of Social Issues, 41*, 63–79. doi: 10.1111/j.1540-4560.1985.tb01129.x

Morrison, G. M., & Cosden, M. A. (1997). Risk, resilience, and adjustment of individuals with learning disabilities. *Learning Disability Quarterly, 20*, 43-60. doi: 10.2307/1511092

Munniksma, A., & Juvonen, J. (2012). Cross-ethnic friendships and sense of social-emotional safety in a multiethnic middle school: An exploratory study. *Merrill-Palmer Quarterly, 58*, 489–506. doi: 10.1353/mpq.2012.0023

Munniksma, A., Verkuyten, M., Flache, A., Stark, T. H., & Veenstra, R. (2015). Friendships and outgroup attitudes among ethnic minority youth: The mediating role of ethnic and host society identification. *International Journal of Intercultural Relations, 44*, 88–99. doi: 10.1016/j.ijintrel.2014.12.002

Murphy, E., Grey, I. M., & Honan, R. (2005). Cooperative learning for students with difficulties in learning: A description of models and guidelines for implementation. *British Journal of Special Education, 32*, 157–164. doi: 10.1111/j.0952-3383.2005.00389.x

Nesdale, D., Durkin, K., Maass, A., Kiesner, J., & Griffiths, J. A. (2008). Effects of group norms on children's intentions to bully. *Social Development, 17*, 889–907. doi: 10.1111/j.1467-9507.2008.00475.x

Nesdale, D., Milliner, E., Duffy, A., & Griffiths, J. A. (2009). Group membership, group norms, empathy, and young children's intentions to aggress. *Aggressive Behavior, 35*, 244–258. doi: 10.1002/ab.20303

Newcomb, A. F., & Bagwell, C. L. (1995). Children' s friendship relations: A meta-analytic review. *Psychological Bulletin, 117*, 306–347. doi: 10.1037//0033-2909.117.2.306

Newcomb, A. F., Bukowski, W. M., & Bagwell, C. L. (1999). Knowing the sounds: Friendship as a developmental context. In W. A. Collins & B. Laursen (Eds.), *Relationships as developmental contexts: Vol. 30. The Minnesota symposia on child psychology* (pp. 63–84). Mahwah, NJ: Lawrence Erlbaum Associates.

Nowicki, E. A. (2003). A meta-analysis of the social competence of children with learning disabilities compared to classmates of low and average to high achievement. *Learning Disability Quarterly, 26*, 171-188. doi: 10.2307/1593650

Nowicki, E. A. (2012). Intergroup evaluations and norms about learning ability. *Social Development, 21*, 130–149. doi: 10.1111/j.1467-9507.2011.00614.x

Nowicki, E. A., & Sandieson, R. (2002). A meta-analysis of school-age children's attitudes towards persons with physical or intellectual disabilities. *International Journal of Disability, Development and Education, 49*, 243–265. doi: 10.1080/1034912022000007270

Nucci, L. (2008). *Nice is not enough: Facilitating moral development.* Upper Saddle River, NJ: Pearson.

Nucci, L., & Turiel, E. (2009). Capturing the complexity of moral development and education. *Mind, Brain, and Education, 3*, 151–159. doi: 10.1111/j.1751-228X.2009.01065.x

Nunner-Winkler, G. (2007). Development of moral motivation from childhood to early adulthood. *Journal of Moral Education, 36*, 399–414. doi: 10.1080/03057240701687970

O'Driscoll, C., Heary, C., Hennessy, E., & McKeague, L. (2015). Adolescents' beliefs about the fairness of exclusion of peers with mental health problems. *Journal of Adolescence, 42*, 59–67. doi: 10.1016/j.adolescence.2015.03.008

Organisation for Economic Co-operation and Development (1995). *Integrating pupils with special needs into mainstream schools.* Retrieved from http://www.oecd.org/fr/edu/scolaire/48948292.pdf

Oser, F. K. (1994). Chapter 2: Moral perspectives on teaching. *Review of Research in Education, 20*, 57–127. doi: 10.3102/0091732X020001057

Oser, F. K., Althof, W., & Higgins-D'Alessandro, A. (2008). The just community approach to moral education: System change or individual change? *Journal of Moral Education, 37*, 395–415. doi: 10.1080/03057240802227551

Page-Gould, E., Mendoza-Denton, R., & Tropp, L. R. (2008). With a little help from my cross-group friend: Reducing anxiety in intergroup contexts through cross-group friendship. *Journal of Personality and Social Psychology, 95*, 1080–1094. doi: 10.1037/0022-3514.95.5.1080

Pakarinen, E., Aunola, K., Kiuru, N., Lerkkanen, M.-K., Poikkeus, A.-M., Siekkinen, M., & Nurmi, J.-E. (2014). The cross-lagged associations between classroom interactions and children's achievement behaviors. *Contemporary Educational Psychology, 39*, 248–261. doi: 10.1016/j.cedpsych.2014.06.001

Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology, 29*, 611–621. doi: 10.1037/0012-1649.29.4.611

Parker, J. G., & Gottman, J. (1989). Social and emotional development in a relational context: Friendship interaction from early childhood to adolescence. In T. Berndt & G. Ladd (Eds.), *Peer relationships in child development. Wiley series on personality processes* (pp. 95–131). New York, NY: Wiley.

Pellegrini, A. D., & Blatchford, P. (2000). *The child at school: Interactions with peers and teachers.* London, UK: Arnold.

Peter, F., Dalbert, C., Kloeckner, N., & Radant, M. (2013). Personal belief in a just world, experience of teacher justice, and school distress in different class contexts. European *Journal of Psychology of Education, 28*, 1221–1235. doi: 10.1007/s10212-012-0163-0

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*, 751–783. doi: 10.1037/0022-3514.90.5.751

Phinney, J. S. (2008). Bridging identities and disciplines: Advances and challenges in understanding multiple identities. *New Directions for Child and Adolescent Development, 120*, 97–109. doi: 10.1002/cd.218

Pianta, R. C. (1999). *Enhancing relationships between children and teachers.* Washington, D.C.: American Psychological Association.

Pianta, R. C., Hamre, B., & Mintz, S. (2012). *Classroom Assessment Scoring System [CLASS] Manual, Upper Elementary* (Vol. 6). Baltimore: Brookes Publishing.

Poulin, F., Cillessen, A. H. N., Hubbard, J. A., Coie, J. D., Dodge, K. A., & Schwartz, D. (1997). Children's friends and behavioral similarity in two social contexts. *Social Development, 6*, 224–236. doi: 10.1111/1467-9507.ep11631577

Powell, J. J. W. (2006). Special education and the risk of becoming less educated. *European Societies, 8*, 577–599. doi: 10.1080/14616690601002673

Raabe, T., & Beelmann, A. (2011). Development of ethnic, racial, and national prejudice in childhood and adolescence: A multinational meta-analysis of age differences. *Child Development, 82*, 1715–1737. doi: 10.1111/j.1467-8624.2011.01668.x

Rose, C. A., Monda-Amaya, L. E., & Espelage, D. L. (2011). Bullying perpetration and victimization in special education: A review of the literature. *Remedial and Special Education, 32*, 114–130. doi: 10.1177/0741932510361247

Rotenberg, K. J. (2010). The conceptualization of interpersonal trust: A basis, domain, and target framework. In K. J. Rotenberg (Ed.), *Interpersonal trust during childhood and adolescence* (pp. 8–27). doi:http://dx.doi.org/10.1017/CBO9780511750946.002

Rubin, K. H., Bukowski, W. M., & Parker, J. G. (2006). Peer interactions, relationships, and groups. In N. Eisenberg, W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development*, *6th ed.* (pp. 571–645). New York, NY: Wiley & Sons Inc.

Ruck, M. D., Park, H., Crystal, D. S., & Killen, M. (2015). Intergroup contact is related to evaluations of interracial peer exclusion in African American students. *Journal of Youth and Adolescence, 44*, 1226–1240. doi: 10.1007/s10964-014-0227-3

Ruck, M. D., Park, H., Killen, M., & Crystal, D. S. (2011). Intergroup contact and evaluations of race-based exclusion in urban minority children and adolescents. *Journal of Youth and Adolescence, 40*, 633–643. doi: 10.1007/s10964-010-9600-z

Rutland, A., & Killen, M. (2015). A developmental science approach to reducing prejudice and social exclusion: Intergroup processes, social-cognitive development, and moral reasoning. *Social Issues and Policy Review, 9*, 121–154. doi: 10.1111/sipr.12012

Rutland, A., Killen, M., & Abrams, D. (2010). A new social-cognitive developmental perspective on prejudice: The interplay between morality and group identity. *Perspectives on Psychological Science, 5*, 279–291. doi: 10.1177/1745691610369468

Sanders, K., & Downer, J. (2012). Predicting acceptance of diversity in pre-kindergarten classrooms. *Early Childhood Research Quarterly, 27*, 503–511. doi: 10.1016/j.ecresq.2011.12.001

Selig, J. P., & Preacher, K. J. (2009). Mediation models for longitudinal data in developmental research. Research in Human Development, 6, 144–164. doi: 10.1080/15427600902911247

Sherif, M. (1966). *Group conflict and cooperation: Their social psychology*. London, UK: Routledge.

Shin, H., & Ryan, A. M. (2014). Early adolescent friendships and academic adjustment: Examining selection and influence processes with longitudinal social network analysis. *Developmental Psychology, 50*, 2462–2472. doi: 10.1037/a0037922

Smith, L. A, & Williams, J. M. (2001). Children's understanding of the physical, cognitive and social consequences of impairments. *Child: Care, Health and Development, 27*, 603–617. doi: 10.1046/j.1365-2214.2001.00236.x

Spears Brown, C., & Bigler, R. S. (2005). Children's perceptions of discrimination: A developmental model. *Child Development, 76*, 533–553. doi: 10.1111/j.1467-8624.2005.00862.x

Stainback, S., Stainback, W., East, K., & Sapon-Shevin, M. (1994). A commentary on inclusion and the development of a positive self-identity by people with disabilities. *Exceptional Children, 60*, 486–490. do: 10.1177/001440299406000602

Stormshak, E. A, Bierman, K. L., Bruschi, C., Dodge, K. a, & Coie, J. D. (1999). The relation between behavior problems and peer preference in different classroom contexts. *Child Development, 70*, 169–182. doi: 10.1111/1467-8624.00013

Swart, H., Hewstone, M., Christ, O., & Voci, A. (2011). Affective mediators of intergroup contact: A three-wave longitudinal study in South Africa. *Journal of Personality and Social Psychology, 101*, 1221–1238. doi: 10.1037/a0024450

Tam, T., Hewstone, M., Kenworthy, J., & Cairns, E. (2009). Intergroup trust in Northern Ireland. *Personality and Social Psychology Bulletin, 35*, 45–59. doi: 10.1177/0146167208325004

Teichman, Y., Bar-Tal, D., & Abdolrazeq, Y. (2007). Intergroup biases in conflict: Reexamination with Arab pre-adolescents and adolescents. *International Journal of Behavioral Development, 31*, 423–432. do: 10.1177/0165025407081470

Thijs, J., & Verkuyten, M. (2014). School ethnic diversity and students' interethnic relations. *British Journal of Educational Psychology, 84*, 1–21. doi: 10.1111/bjep.12032

Tropp, L. R., & Prenovost, M. A. (2008). The role of intergroup contact in predicting children's interethnic attitudes: Evidence from meta-analytic and field studies. In S. R. Levy & M. Killen (Eds.), *Intergroup attitudes and relations in childhood through adulthood* (pp. 236–248). New York, NY: Oxford University Press.

Turner, R. N., Hewstone, M., Swart, H., Tam, T., Myers, E., & Tausch, N. (2010). Promoting intergroup trust among adolescents and young adults. In K. J. Rotenberg (Ed.), *Interpersonal trust during childhood and adolescence* (pp. 295–321). doi: 10.1017/CBO9780511750946.014

Turner, R. N., Hewstone, M., Voci, A., & Vonofakou, C. (2008). A test of the extended intergroup contact hypothesis: The mediating role of intergroup anxiety, perceived ingroup

and outgroup norms, and inclusion of the outgroup in the self. *Journal of Personality and Social Psychology, 95*, 843–860. doi: 10.1037/a0011434

Vaughn, S., Elbaum, B. E., & Schumm, J. S. (1996). The effects of inclusion on the social functioning of students with learning disabilities. *Journal of Learning Disabilities, 29*, 599–608. doi: 10.1177/002221949602900604

Veenstra, R., & Dijkstra, J. K. (2011). Transformations in adolescent peer networks. In B. Laursen & W. A. Collins (Eds.), *Relationship pathways: From adolescence to young adulthood* (pp. 135–154). doi: 10.4135/9781452240565.n7

Verkuyten, M. (2008). Multiculturalism and group evaluations among minority and majority groups. In S. Levy & M. Killen (Eds.), *Intergroup attitudes and relations in childhood through adulthood* (pp. 157–172). New York, NY: Oxford University Press.

Verkuyten, M., & Thijs, J. (2002). Racist victimization among children in The Netherlands: The effect of ethnic group and school. *Ethnic and Racial Studies, 25*, 310–331. doi: 10.1080/01419870120109502

Veugelers, W., & Vedder, P. (2003). Values in teaching. Teachers and Teaching, 9, 377–389. doi: 10.1080/1354060032000097262

Vieno, A., Perkins, D. D., Smith, T. M., & Santinello, M. (2005). Democratic school climate and sense of community in school: A multilevel analysis. *American Journal of Community Psychology, 36*, 327–341. doi: 10.1007/s10464-005-8629-8

Vitaro, F., Tremblay, R. E., Kerr, M., Pagani, L., & Bukowski, W. M. (1997). Disruptiveness, friends' characteristics, and delinquency in early adolescence: A test of two competing models of development. *Child Development, 68*, 676–689. doi: 10.1111/j.1467-8624.1997.tb04229.x

Waldrip, A. M., Malcolm, K. T., & Jensen-Campbell, L. A. (2008). With a little help from your friends: The importance of high-quality friendships on early adolescent adjustment. *Social Development, 17*, 832–852. doi: 10.1111/j.1467-9507.2008.00476.x

Wang, M., & Eccles, J. S. (2012). Social support matters: Longitudinal effects of social support on three dimensions of school engagement from middle to high school. Child Development, 83, 877–895. doi: 10.1111/j.1467-8624.2012.01745.x

Wentzel, K. R. (1998). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of Educational Psychology, 90*, 202–209. doi: 10.1037/0022-0663.90.2.202

Wentzel, K. R., Battle, A., Russell, S. L., & Looney, L. B. (2010). Social supports from teachers and peers as predictors of academic and social motivation. *Contemporary Educational Psychology, 35*, 193–202. doi: 10.1016/j.cedpsych.2010.03.002

Wettstein, A., Ramseier, E., & Marion Scherzinger, M. (in press). Eine konfirmatorische Mehrebenen-Faktorenanalyse zur Schülerwahrnehmung von Störungen im Unterricht der Klassen- und einer Fachlehrperson [A confirmatory mulitlevel-factor analysis on students' perceptions of classroom disruptive behavior]. *Psychologie in Erziehung und Unterricht.*

Wiener, J., & Schneider, B. H. (2002). A multisource exploration of the friendship patterns of children with and without learning disabilities. *Journal of Abnormal Child Psychology, 3*0, 127–141. doi: 10.1023/A:1014701215315

Wright, S. C., Aron, A., McLaughlin-Volpe, T., & Ropp, S. A. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology, 73*, 73–90. doi: 10.1037/0022-3514.73.1.73

CV Jeanine Grütter

Wuhrgasse 25, 4900 Langenthal 079 365 10 64
janeg32@gmx.net Birth date: 14.07.1986

Employment

Research Associate September 2013 – December 2016
University for Teacher Education, Institute of Diversity in Education

- Planned, coordinated, realized and monitored the project *Social exclusion of minority group children* involving interviews with 1400 children and 70 teachers at two waves of data collection using a multi-method design
- Evaluated practices and current policies of inclusive schooling in the State of Zurich in cooperation with the Department of Education used in the development of a monitoring tool and school policies
- Supervised and guided 8 Bachelor- and Master students in conducting research projects for their thesis
- Trained and supervised 6 research assistants to perform effectively
- Designed teacher trainings in classroom management based on the study results

Lecturer July 2014 – December 2014
University of Zurich

- Designed, prepared and lectured the seminar for master students in psychology: *Group processes in teams: Leadership and group composition*
- Master students gained knowledge in how to manage diverse teams and became familiar with the current literature regarding diversity, leadership, and collaboration in teams

Educational and Clinical Psychologist June 2012 – August 2013
Educational counseling service, City of Zurich, Glattal

- Counseled children, adolescents, parents, teachers and schools for questions concerning child development and education in a multi-cultural environment
- Conducted psychological assessments and diagnostics of children's capacities
- Applied systemic work methods to plan, coordinate and realize counseling and support for clients in difficult life situations
- Cooperated in interdisciplinary teams (with local authorities, child-welfare and other social services) to ensure child protection

Psychologist and Teacher for Special Education April 2012 – November 2012
School for multiply handicapped children, Ilgenhalde, Fehraltorf

- Prepared, realized and evaluated classes designed to promote individual, academic and life skills
- Applied psychological diagnostics of developmental stages
- Counseled parents in how they could enhance the social participation of their children
- Contributed to school development in interdisciplinary work groups
- Leadership: Instructed and supervised teaching assistants and interns

Psychologist and Assistant Teacher for Special Education August 2007 – July 2011
School for multiply handicapped children, Ilgenhalde, Fehraltorf

- Preparation and realization of classes
- Applied behavioral therapy for children with autism and mental disabilities using the therapeutic programs ABA and TEACCH

Best Buddies, Zurich Switzerland May 2009 - June 2009

- Planned campaigns and social events with the aim to foster integration of people with disabilities
- Built a strategic network with other related organizations

Internship as a Psychologist January 2009 – April 2009

Govinda Development Association (NGO), Kathmandu, Nepal

- Focused on capacity building of teachers (topics: psycho-social health, classroom management and special education)
- Supervised and counseled social education workers from a children's home regarding topics of stress-management and child development
- Assessed, employed, and trained a teacher who had the skills to teach a classroom for children with special needs (after 7 years this teacher is still teaching the classroom with joy and experience!)
- Conducted sessions for team building and helped to identify different points of view regarding responsibilities and education philosophies
- Managed a workshop on positive education in a congress organized by Children Net Nepal with the aim of promoting child rights

In addition to above roles, I also completed an internship as a psychologist (educational and counseling service, Langenthal, 5 months) and worked as a sales assistant (Jelmoli Zurich, 5 years) and integration manager (Interunido Langenthal, 2 years)

Civic Engagement

Board Member and Psychological Consultant December 2013 – December 2016

Govinda / Shangrila Development Association

Board Member and Chairperson

- I am involved in project management and monitoring of 8 ongoing projects involving more than 8'000 beneficiaries
- I am involved in the planning, implementation, and evaluation of new and ongoing projects
- I plan strategically with my team what our next goals and steps are, acquire funding for on-going projects, and form networks with other NGOS

Psychological Consultant (Main task: Monitoring and Capacity building) December 2015 – present

- I supervise and guide our Nepalese employees of the Shangri-La Orphanage Home and monitor the project using our reporting tools
- I supervise interns: I provide training, create their job descriptions, monitor their reports, and supervise them in regular Skype-meetings
- In February 2016, I conducted a workshop for teachers on trauma management after natural disasters and helped to ensure the provision of psychological support in cooperation with local NGOs

Academic Education

PhD studies, Department of Psychology, University of Zurich September 2013 – November 2016

Visiting research stay, University of Toronto, January 2015 – December 2015
Lab for Social Emotional Development and Intervention

Master of Science in Psychology, Department of Psychology, University of Zurich August 2005- October 2011

Main subject: Psychology
Minor subjects: Education, Abnormal Psychology of Children and Adolescents

Language Skills

German: Mother tongue

English and Spanish: Excellent knowledge (C1-C2)

French: Very good knowledge (B2-C1)

Italian, Portuguese, Nepali: Basic knowledge (A1)

IT-Skills / Statistics

Excellent knowledge in: office software, social network analysis, multilevel modeling, and multivariate methods using statistic programs, such as R, SPSS, MPlus, MPnet, UCINET, AMOS

Further education and training

Research methods

June 2016	Evaluating Social Programs (Massachusetts Institute of Technology, Abdul Latif Jameel Poverty Action Lab)
May 2016	Bayesian Statistics for Social Sciences (David Kaplan, UZH)
April 2016	Multilevel Analysis in R: Advanced Methods (UZH)
February 2016	RSiena Winter School (ETH Zurich)
July 2015	Manchester Methods Summer School: Advanced Methods for Social Network Analysis
April 2014	Longitudinal data analysis (Amos & M+) (UZH)

Teaching skills

January 2014	Class: Classroom Assessment Scoring System (Teachstone, USA)
January 2014	How to be a good lecturer, university didactic (UZH)

Counseling and therapeutic skills

June 2013	Job Shadowing: Marlborough Family Education Center in London, Multi-systemic family therapy (Eia Asen); Oxleas Center (CAMHS), 'Non violent resistance' Program (NVR); Peter Jacob: systemic family therapy (Comenius life long learning program)
April 2013	Systemic work with parents (Wilob)
April 2013	Emergency psychology (SPD Zurich)
March 2013	Systemic-solution oriented work with children and adolescents (Wilob, Lenzburg)
January 2013	ADHD: Assessment, Diagnostics and Treatment (SPD Zurich)
November 2012	Inspire children: short term interventions in school psychology (VSKZ)
August 2012	Prevention of violence in children with SEN (Fischer & Wunderlich)
Mai 2012	TEACCH: Treatment and Education of Autistic and related Communication handicapped Children

Scholarships and Awards

August 2016	Travel grant, Swiss Academy of Humanities and Social Sciences
April 2016	Travel grant from the University of Zurich
September 2014	Mobility grant from the Swiss National Foundation
June 2013	Travel grant from the Comenius life long learning program
July 2010 – October 2011	Scholarship from Moriz and Elsa von Kuffner and the Walter and Anne Marie Boveri Foundation
November 2009	Research award for the best research project in 2009 from the University of Zurich

Supervised Bachelor and Master Theses

During my time at the Teacher University in Lucerne, I supervised the following theses:

Bachelor thesis:

Ziswiler, C. (2015). Thematisierung von besonderen Bedürfnissen im Unterricht. Auswirkungen auf die sozialen Beziehungen der Kinder.

Master theses:

Rogger-Lamparter, D. (2016). Kinder mit ADHS. Aktueller Forschungsstand und Interventionsmöglichkeiten in der Schule.

Durrer, S. (2016). CLASS in integrativen Settings. Untersuchung zur Anwendung von CLASS in Klassen mit integrativer Förderung.

Dermon, C. & Steiner, E. (2016). Soziales Klima und offener Unterricht: Eine Wechselwirkung?

Niederberger, E. (2016). Vergleich zweier Gewaltpräventionskonzepte: Gewaltfreie Kommunikation und gewaltloser Widerstand. Eine gewaltfreie pädagogische Haltung zur Reduktion von aggressivem Schülerverhalten.

Willi, L. & Aeberhard, S. (2016). Soziale Beziehungen und Wohlbefinden in der Schule.

Reviewing Experience

Ad-Hoc Reviewer for Small Group Research and British Journal of Developmental Psychology

The PhD Candidate's Contributions

My dissertation includes 6 articles that resulted from the data of two larger studies. My contributions to each of these articles are outlined in Table I. Furthermore, I was involved in the conception and realization of a teacher-training course on social relationships in inclusive classrooms, which was based on the study findings and was specifically designed for the teachers who participated in our two-wave study.

Table I. *Overview of the PhD candidate's contributions to the two studies and six articles of this dissertation*

Chapter in this Dissertation	*Article*	*PHD candidate's contributions*
1	Grütter, Meyer, & Glenz (2015)	- Planning, preparation, coordination, and realization of the study[1], including the organization of face to face interviews with 439 children - Data processing using hierarchical linear modeling and social network analysis - Conception and involvement in the development of a new technique for defining peer cliques in social networks completed by the third author - Interpretation of the data - Conception and writing of the article - Revision of the article according to the recommendations of the co-authors and the reviewers
2	Grütter, Gasser, & Malti (under review)	- Planning, preparation, coordination, and realization of the study[1] including the organization of survey data from 1209 students and 61 teachers - Qualitative analysis and interpretation of the data of the pre-study - Data processing using linear modeling and social network analysis (including the programming of an algorithm for extracting the closeness of mutual cross-group friendships) - Interpretation of the data - Conception and writing of the article - Revision of the article according to the recommendations of the co-authors
3	Grütter & Tropp (under review)	- Planning, preparation, coordination, and realization of the study[1], including the organization of face-to-face interviews with 439 children - Data processing using linear modeling and social network analysis (including the programming of an algorithm for extracting mutual cross-group friendships) - Interpretation of the data - Conception and writing of the article - Revision of the article according to the recommendations of the co-author

gesehen, Zürich, 10.10.16

4	Grütter, Gasser, Zuffiano, & Meyer (under review)	- Planning, preparation, coordination, and realization of the study[1], including the organization of survey data from 1209 students and 61 teachers at T1 and 1009 students and 54 teachers at T2 - Data management of the multi-method-multi-informant data of the two waves - Data processing using structural equation modeling and social network analysis - Interpretation of the data in cooperation with the third author - Conception and writing of the article - Revision of the article according to the recommendations of the co-authors
5	Gasser, Grütter, Torchetti, & Buholzer (under review, invited for resubmission)	- Planning, preparation, coordination, and realization of the study[1], including the organization of survey data from 1209 students and 61 teachers at T1 and 1009 students and 54 teachers at T2 - Data management of the multi-method-multi-informant data of the two waves - Data analysis using hierarchical binary logistic models and hierarchical linear models in cooperation with the third author - Interpretation of the data in cooperation with the first and the third author - Writing of the results section - Contributions to drafts of the complete manuscripts during the preparation and revision of the article
6	Gasser, Grütter, Buholzer, & Wettstein (under review)	- Planning, preparation, coordination, and realization of the study[1], including the organization of survey data from 1209 students and 61 teachers at T1 and 1009 students and 54 teachers at T2 - Data management of the multi-method-multi-informant data of the two waves - Observation and coding of teacher-student interactions with the CLASS-tool within 12 school classes and organization of the observations within the remaining 49 classes (4 research assistants) - Data analysis using hierarchical linear models - Interpretation of the data - Writing of the methods and results section - Contributions to drafts of the complete manuscript

[1] This refers to the complete project management, including the conception of the study and study design, organization of the sample and gaining access to the field through official permissions from local school authorities, selecting and training research assistants, development of study measures, pre-testing, data acquisition and data processing.

gesehen, Zürich, 10.10.16
K. Jonas

Universität Zürich[UZH]

Philosophische Fakultät
Studiendekanat

Universität Zürich
Philosophische Fakultät
Studiendekanat
Rämistrasse 69
CH-8001 Zürich
www.phil.uzh.ch

Erklärung

Hiermit erkläre ich, dass die Dissertation von mir selbst ohne unerlaubte Beihilfe verfasst worden ist und diese Dissertation noch an keiner anderen Fakultät eingereicht wurde.

Ort und Datum: Zürich, 11.10.16

Unterschrift: J. Grün